TECHNICAL NOTE – AGRICULTURAL LAND CLASSIFICATION

IN SUPPORT OF PLANNING APPLICATION

FOR THE CONSTRUCTION AND OPERATION OF A 48MW SOLAR FARM COMPRISING GROUND MOUNTED SOLAR PHOTOVOLTAIC ARRAYS TOGETHER WITH ASSOCIATED INFRASTRUCTURE AND LANDSCAPING

LAND NORTH OF ROMAN BANK AND EAST OF MIDDLE MARSH ROAD AT RED HOUSE FARM, HOLBEACH BANK, SPALDING, PE12 8BY

GRID REFERENCE: X536995 Y328849

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Contents

1. Introduction

1.1 This Technical note has been prepared to present the percentage of different grades of agricultural land wherein major solar farms applications are currently being considered, or have been recently approved within South Holland District Council.

1.2 Contained herein is also a demonstration of how the Applicant has considered the location of the proposed development on a site situated on Best and Most Versatile (BMV) Agricultural Land.

1.3 BMV land is generally considered unsuitable for forms of development such as a solar farm. This statement will outline why in this instance, the selection of BMV land is considered appropriate.

2. The Development

2.1 The application is for the construction of a temporary 48MW solar farm including associated infrastructure and landscaping at land north of Roman Bank and east of Middle Marsh Road at Red House Farm, Holbeach Bank, Spalding, PE12 8BY (Grid Reference X536995, Y328849). The application site measures approximately 80 hectares of greenfield land located between the villages of Holbeach St Marks, Holbeach Bank and Holbeach Hurn. The site is bound by Middle Marsh Road to the west, with farmsteads and isolated residential properties located on the western side of Middle Marsh Road, opposite the site. Roman Bank borders the southern boundary of the wider site and there is open countryside to the north and east, with Eastern Road located beyond the eastern boundary. The site boundaries are largely defined by drainage ditches which demarcate existing field boundaries within the site also.

2.2 An Agricultural Land Survey has been undertaken and accompanies the application. The report concludes that the land is entirely Grade 2. As such, the site is deemed to be best and most versatile agricultural land, which Annex 1 of the NPPF states comprises that land in Grades 1, 2 and 3a. It should be noted, however, that South East Lincolnshire has a high proportion of high-quality agricultural land, meaning it is largely made up of the best and most versatile agricultural land with little opportunity to locate developments on poorer quality land.

2.3 The solar panel arrays would be mounted on steel posts driven into the ground, and no substantial areas of concrete construction would be required, with the exception of foundations for the inverters and the sub-station buildings. The solar panel arrays could therefore be removed when planning permission has expired with no likely permanent loss of agricultural land in the longer term. Whilst soil would be disturbed in some parts of the site through the construction of the switch station and access tracks along with the installation of buried cables, this equates to a very small part of the total area and much of the soil disturbance is likely to be reversible during decommissioning. In addition, the land situated around the proposed solar arrays could remain in agricultural use through the grazing of sheep, and therefore when the development is decommissioned, the reversible effects and the potential grazing of the land would allow the land to recover from its previous intensive use, benefitting the soil condition and structure.

3. National Planning Policy and Guidance

3.1 Paragraph 174 of the National Planning Policy Framework (NPPF) considers: *"Planning policies and decision should contribute to and enhance the natural and local environment by; b) recognizing the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland."* Footnote 58 considers that *"Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality."* Best and Most Versatile Land (BMV) is defined (NPPF, Glossary) as being land of Grade 1, 2 or 3a. Therefore, land classified as being 3b, 4 or 5, represents 'poorer quality land.'

3.2 Paragraph 152 states that the planning system "*should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should … support renewable and low carbon energy and associated infrastructure*." Paragraph 155 states to help increase the use and supply of renewable and low carbon energy and heat, plans should: a) "*Provide a positive strategy for energy from these sources, that maximises the potential for suitable development, while ensuring that adverse impacts are addressed satisfactorily (including cumulative landscape and visual impacts); b) Consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development; and c) Identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems and for co-locating potential hear customers and suppliers*."

3.3 The NPPF also is clear that there is no requirement for applicants to demonstrate the need for renewable energy development. Paragraph 158 states that when determining planning applications for renewable and low carbon development, local planning authorities should:

a) "Not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions; and

b) Approve if its impacts are (or can be made) acceptable. Once suitable areas for renewable and low carbon energy have been identified in plans, local planning authorities should also expect consequent applications for commercial scale projects outside these areas to demonstrate that the proposed location meets the criteria used in identifying suitable areas."

Planning Practice Guidance

3.4 In terms of renewable and low carbon energy, PPG (Paragraph: 001 Reference ID: 5-001-20140306) states that:

"Increasing the amount of energy from renewable and low carbon technologies will help to make sure the UK has a secure energy supply, reduce greenhouse gas emissions to slow down climate change and stimulate investment in new jobs and businesses. Planning has an important role in the delivery of new renewable and low carbon energy infrastructure in locations where the local environmental impact is acceptable."

3.5 The PPG goes on to state (Paragraph: 013 Reference ID: 5-013-20150327) states that: *"where a proposal involves greenfield land, whether (i) the proposed use of any agricultural land has been shown to be necessary and poorer quality land has been used in preference to higher quality land; and (ii) the proposal allows for continued agricultural use where applicable and/or encourages biodiversity improvements around arrays."*

4. Local Planning Policy

4.1 At its meeting on Friday 8th March 2019, the Joint Strategic Planning Committee adopted the South East Lincolnshire Local Plan 2011-2036. South Holland's existing Development Plan is a joint local plan with Boston Borough Council and Lincolnshire County Council, known as the South East Lincolnshire Local Plan, and was adopted on 8th March 2019 and covers the period 2011-2039. The South East Lincolnshire Local Plan provides guidance as to the Council's policies, forming a basis against which all development proposals in the borough are decided. The guiding renewable energy policy in the South East Lincolnshire Local Plan is **Policy 31: Climate Change and Renewable and Low Carbon Energy**. This policy states:

"With the exception of Wind Energy the development of renewable energy facilities, associated infrastructure and the integration of decentralised technologies on existing or proposed structures will be permitted provided, individually, or cumulatively, there would be no significant harm to:

1. *visual amenity, landscape character or quality, or skyscape considerations;*
2. *residential amenity in respect of: noise, fumes, odour, vibration, shadow flicker, sunlight reflection, broadcast interference, traffic;*
3. *highway safety (including public rights of way);*
4. ***agricultural land take**;*
5. *aviation and radar safety;*
6. *heritage assets including their setting; and*
7. *the natural environment.*

Provision should be made for post-construction monitoring and the removal of the facility and reinstatement of the site if the development ceases to be operational.

Proposals by a local community for the development of renewable and low carbon sources of energy, in scale with their community's requirements, including supporting infrastructure for renewable energy projects, will be supported and considered in the context of contributing to the achievement of sustainable development and meeting the challenge of climate change and against criteria B1-7."

5. Impacts on agricultural Land in South Holland

5.1 The areas of best and most versatile (BMV) agricultural land for each development relevant to the proposed development has been extracted from the relevant planning application, the planning support statement and any accompanying agricultural land classification report.

Table 5.1: BMV land potentially affected by recent/pending Solar Farm applications in South Holland

		BMV Hectares (Ha)			Ha	Ha	Ha	Ha
Application Reference	**Status**	**Grade 1**	**Grade 2**	**Grade 3a**	**Grade 3b**	**Grade 4**	**Grade 5**	**Area BMV**
H04-0849-22	Approved		97.3					97.3
H13-0190-23	Approved	2.24						2.24

5.2 The total cumulative impact of both the applications listed in the table above (which are recently consented and yet to be implemented) would potentially result in approximately 99.54ha of Grades 1 and 2 agricultural land lost. However, information taken from the Department for the Environment, Food and Rural Affairs (DEFRA) Provisional Agricultural Land Classification (ALC) (England) spatial data (Source: https://naturalengland-defra.opendata.arcgis.com/datasets/provisional-agricultural-land-classification-alc-england/explore) reveals that the majority of land within South Holland District Council is located on Grades 1 and 2 agricultural land (see Image 5.1 overleaf). This is acknowledged in the South East Lincolnshire Local Plan, wherein paragraph 7.4.4 describes the green field land across the region as being "*mostly Grade 1 and 2 agricultural land*."

5.3 The spatial data reveals the total land area of the District Council to be approximately 75,007.61ha; 679.32ha of which is classed as urban land, meaning that there is approximately 74,328.29ha of farmable land in South Holland. Approximately 42,731.97ha of land is Grade 1

and 29,633.18ha of land is Grade 2 (total in combination: 72,365.15ha), meaning that only 1,963.14ha, 2.64% of the total farmable land, is Grade 3 or below.

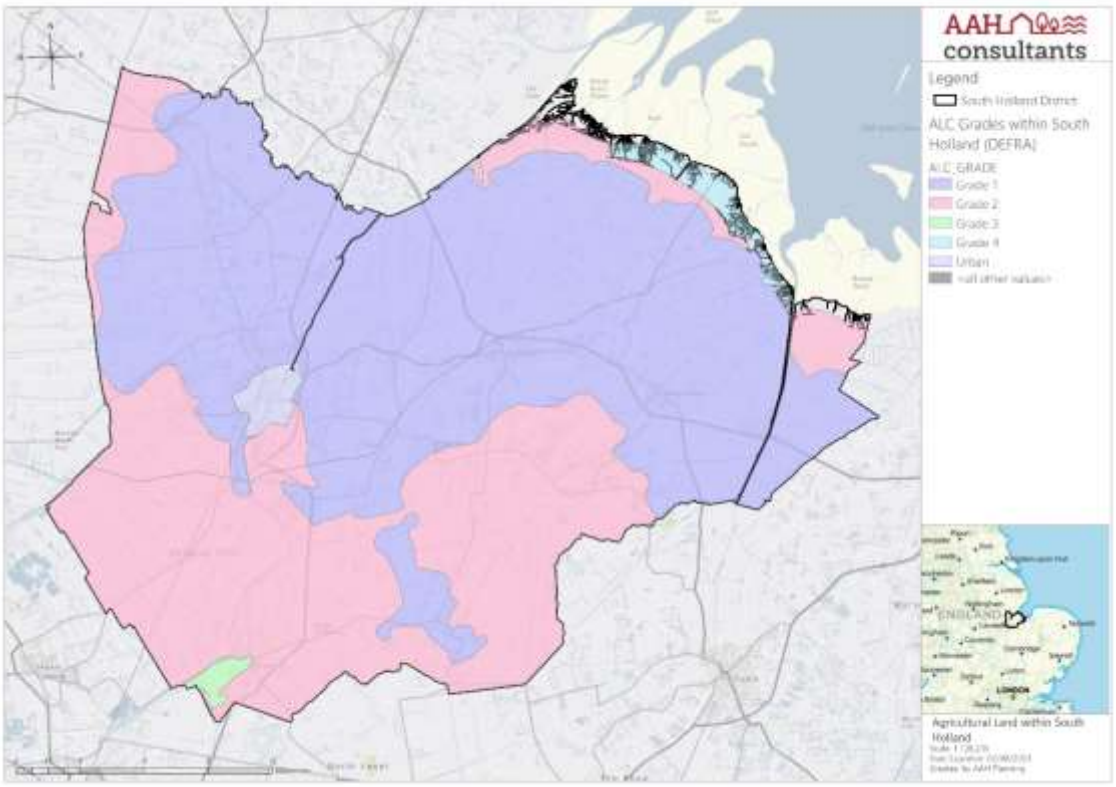

Image 5.1: Map showing the distribution of agricultural land in South Holland

5.4 The cumulative impact of the two applications listed in Table 5.1 would potentially result in the loss of merely 0.14% of the Grade 1 or 2 land available, and only 0.13% of the total farmable land in the District.

5.5 The proposal site comprises approximately 81.98ha of Grade 1 land, which amounts to approximately 0.11% of the total Grade 1 and Grade 2 land in the District. This means that, pending approval, the proposal in culmination with the other applications discussed herein would amount to a potential loss of only 0.25% of Grade 1 or 2 agricultural land in South Holland.

5.6 It would not be possible to use the land on the proposal site for crop production during the lifetime of the development. However, the proposal would not result in a permanent loss of BMV land, since the application is for development with a time limited consent of 40 years. Following decommissioning, the land can be restored to agricultural use.

5.7 DEFRA has published a 'Best Practice for Managing Soil Organic Matter in Agriculture' report, which illustrates that there is evidence that UK soils may be losing 'soil organic matter' (SOM), which is fundamental to the maintenance of soil fertility and functions. It also outlines that the Sustainable Farming and Food Strategy has a target "*to halt the decline in soil organic matter in vulnerable agricultural soils by 2025, whilst maintaining as a minimum, the soil organic matter of other agricultural soils, taking into account the impacts of climate change*."

5.8 The report goes on to explain that land-use change and ploughing are contributing factors to this loss of SOM, and that taking land out of cultivation is an effective method of increasing SOM levels. In this respect, temporary solar farm developments can have a beneficial impact on the viability of BMV land for use in crop production.

5.9 It should also be noted that the proposal includes plans to allow sheep grazing on the site during the lifespan of the development, meaning that the land would maintain some light agricultural use. In 2014, The Building Research Establishment (BRE) published the "Agricultural Good Practice Guidance for Solar Farms" which describes experience and principles of good practice for the management of small livestock in solar farms. The guidance explains that careful management of on-site grazing can even lead to biodiversity benefits when grazing is limited during spring or summer months and wildflowers are allowed to grow.

6. Food Security

6.1 It has been suggested that the development of solar farms on best and most versatile agricultural land could have a significant impact on food security in the UK. Solar Energy UK have produced a briefing note that is appended to this technical note that sets out why this is not the case.

6.2 The briefing note outlines how solar farms assist in food production in the following ways:

- Solar farms can improve soil quality by removing land from cultivation temporarily (see paragraphs 5.7 and 5.8 for further explanation on this point);

- Energy prices are increasing and this impacts agriculture. Solar energy provides a cheaper energy alternative, which will drive down costs for farmers. Farmers can also host solar farms on their land for an additional revenue stream;

- Soil is heavily impacted by climate change. In June 2019 the Environment Agency published a memo titled "The state of the environment: soil", wherein it was stated that "*Changes to soil temperature and moisture levels will make farm planning difficult… Without action, soils will become increasingly less fertile, damaging wildlife and the ecosystem services that soils provide*." Solar energy addresses climate change, and in doing so can positively impact the quality of the UK's soils, having a knock-on benefit on food production. This is further supported by the UK Government's Food Security Report from December 2021 which states that "*The biggest medium to long term risk to the UK's domestic production comes from climate change and other environmental pressures like soil degradation, water quality and biodiversity.*"

7. The Bigger Picture; Development in England

7.1 In the context of England, only a very small percentage of land is developed and Solar Farms take up approximately 0.1% of all land in the UK (Source: Solar Power Portal). As of April 2022, 8.7% of land in England is of developed use, with 91.1% of non-developed use and the remaining 0.2% being vacant (Source: GOV.UK). The top 3 land use groups were 'Agriculture' (63.1%), 'Forestry, open land and water' (20.1%), and 'Residential gardens' (4.9%). 6.8% of land within the Green Belt is of developed use. (Source: GOV.UK, 2022).

8. The District Picture; Agricultural and Brownfield Land in South Holland

8.1 To reiterate, the development is to be connected to the existing power infrastructure via a link to an existing pylon on the power line between the substations in Walpole and Boston.

8.2 The proposed electricity connection solution is to install a 132kV tee-off tower and 132kV metering substation adjacent to the 132kV overhead line within the application site, to provide a maximum Import Capacity of 250kW and a maximum Export Capacity of 39,900kW (39.9mW). The 132kV overhead line for connection generally runs north to south from Walpole Grid Supply Point (GSP) to Boston Bulk Supply Point (BSP).

Connection Point

8.3 Direct connection at either of these substations was not considered to be feasible, either technically, viably or physically due to the particular constraints of the substation sites. The site was therefore selected on the basis of the ability to connect direct to the existing powerline – screening potential sites in relation to issues such as flood risk and accessibility - eventually coming to a commercial agreement with the current site owner in relation to the application site.

8.4 GPC has undertaken an exhaustive search for connection opportunities to both substations and circuits within the Walpole GSP group network. Technical constraints in respect to the electricity grid and physical constraints made direct connections to Walpole GSP, and Boston BSP commercially unviable prospects. Feasibility analysis undertaken by GPC in early 2021 identified a potential grid connection opportunity on to the aforementioned 132Kv circuit. Following an initial planning screening exercise, GPC approached all landowners with suitable holdings beneath the circuit.

8.5 Landowner engagement yielded a number of prospective sites to host the proposed solar farm. Whilst a variety of constraints were identified and addressed across sites, the overriding concern was the risk of tidal flooding to the proposed installation. Regardless of Solar Farms being classified as ‘essential infrastructure’ by planning practice guidance and being an appropriate principle within all Flood Zones, these must be constructed and operated in a manner that is safe, insurable and meets commercial requirements.

8.6 As the current point of connection (POC) is found to be the most appropriate and deliverable the consideration of alternative sites (which in itself is not a material planning consideration) should be properly focused on land within 2km of this connection point – as would be the case if the development was to be connected to an existing sub-station at the POC location.

8.7 All sites identified by GPC with appropriate site characteristics were located within **Tidal Flood Zone 3** that, due to annual exceedance probability risk, and the presence of flood defence infrastructure is sub classified as Flood Zone 3a. The proposed development was identified as the lowest flood risk available site. GPC made their business decision to proceed with the site and submitted an application to Western Power Distribution (now National Grid Electricity Distribution) to connect to their 132kV network in March 2021. An offer of connection was accepted later that year.

Brownfield

8.8 There are no previously developed sites on South Holland District Councils Brownfield Register within the application area of search – which comprises land within 2km of the POC. In any event, it should be noted, however that whilst brownfield land might be ideal in some cases, the solar industry finds it hard to compete on land rental values compared to other forms of development such as residential or commercial. No suitable brownfield sites of a similar size have been identified within proximity to the grid connection.

Alternative Sites

8.9 There are 8 sites identified within the South East Lincolnshire Strategic Housing Land Availability Assessment (SELSHLAA) (2016) which covers South Holland which are within the 2km search area. These are set out below. None of these sites comprise "previously developed land".

8.10 Seven of the sites have been discounted in any event as being too small (Hob036; Hob054; Hob043; Hob053; Hob041; Hob040; and Hob028) to accommodate the development as proposed. These sites are not suitable for the proposed 48 MW Solar Farm based upon the feasibility and economic viability of accommodating a 48 MW Solar Farm development on a site considerably smaller than the proposed 80-hectare site. Disaggregation of the PV arrays is not considered appropriate or feasible, presenting greater environmental impacts than containment of the PV arrays within one site.

8.11 A further site at Holbeach St Marks (Hob027) measures 87.12 hectares. This is of a similar size to the proposed Site and therefore could theoretically accommodate a 48MW Solar Farm. However, the site, is also located in Flood Zone 3, and therefore not sequentially preferred. It is also further from the grid connection, which would likely require greater length of cabling leading off site to facilitate grid connection. Furthermore, its close proximity to the settlement of Holbeach St Marks, means that any development on this site is likely to have a greater impact on residential amenity and on designated heritage assets, which are located within the settlement when compared to the Site proposed for development.

8.12 There are no Local Plan Employment Allocations within the 2km search area, and there are no residential commitments in the Local Plan within the 2km search Area. Therefore, there are no other sites that can accommodate the 48 MW Solar Farm which have been allocated for development, albeit for other uses.

9. Agricultural Land Classification Report

Natural England and BRE Guidance

9.1 The accompanying ALC report was prepared on behalf of Soil Environment Services by Louise Tavasso BSc (Hons) M.I. SoilSci Environmental Consultant, and should be read in conjunction with this statement. SES Ltd undertake several dozen Agricultural Land Classification (ALC) or Land Capability Classifications for Agriculture (LCCAScotland) surveys a year and have worked on sites up to 1000 ha including housing, roads, solar farm and mineral extraction developments. They have been undertaking ALC surveys for 25 years and have won many contracts to supply Land Classification reports to local authorities as part of their strategic development plans.

9.2 Under the Town and Country Planning (Development Management Procedure) (England) Order 2015 (DMPO) Natural England is a statutory consultee on development that would lead to the loss of over 20ha of 'best and most versatile' (BMV) agricultural land (land graded as 1, 2 and 3a in the Agricultural Land Classification (ALC) system), where this is not in accordance with an approved plan. Natural England did not object to the proposal and, in their consultation response for this application, said that the proposal is unlikely to lead to significant long-term loss of best and most versatile agricultural land. Guidance from the BRE outlines how agricultural use can be continued after construction of solar panels and that sheep, chickens and geese can graze vegetation around the solar panels. This guidance has been used to inform the accompanying Grazing Management Plan, which should also be read in conjunction with this report.

10. Application Precedents in South Holland

10.1 South Holland District Council approved a 10MW solar farm (Application Ref: H20-0937-13) on Grade 2 agricultural land. The proposal was approved in-line with a recommendation of approval by the planning manager. Natural England didn't object to the proposal as they believed it wouldn't lead to a long-term loss of such land as the panels could be readily removed. The planning officer, in the conclusion of their report, stated: "*In accordance with government advice, large scale solar farms should be sensitively placed and their impact should, or be made, acceptable. Although the proposal would result in the loss of productive high quality agricultural land, this is outweighed by the benefits of the scheme (ie, the provision of renewable energy). Moreover, the proposal would not lead to the long-term loss of such land because the panels could be readily removed*." South Holland District Council also approved a 15.5MW solar farm (Application Ref: H02-0454-14) situated on Grade 2 agricultural land.

10.2 Although not on the same scale as the proposed site, the examples above demonstrate how the Council acknowledges that the inherent benefits of a solar farm proposal can outweigh the potential loss of BMV land.

10.3 A solar farm of a similar size was recently approved by Boston Borough Council (Application Ref: B/21/0443) which was also located on Best and Most Versatile Land. The ALC report (June 2021) submitted for the aforementioned application resulted in a classification of 26.06 ha of Grade 2 and 54.3 ha of Grade 3a land, therefore all falling within the BMV category. Natural England did not object to this proposal, and stated that "We consider that the proposed development is unlikely to lead to significant long-term loss of best and most versatile land, as a resource for future generations. This is because the solar panels would be secured to the ground by steel piles with limited soil disturbance and could be removed in the future with no permanent loss of agricultural land quality likely to occur, provided the development is undertaken to high standards. Although some components of the development, such as construction of a sub-station, may permanently affect agricultural land this would be limited to small areas." Natural England did require however the LPA to consider the loss of BMV (albeit temporary) against other planning considerations. The LPA considered that due to the small areas occupied by the substation compound, batteries, inverters and access roadways, the only impacts on soils will be the insertion of support legs for the solar panels and temporary surface compaction of soils during equipment installation.

10.4 It further considered that grazing can take place between rows of panels and the land will be capable of returning to almost unchanged agricultural quality and use after the typical life time of the solar park installation and that due to the wider area comprising of the same or higher-grade land, there was no loss of higher grades of agriculture land. It was concluded that whilst the loss of arable land was inevitable, there was potential for grazing alongside ecological and landscaping enhancements. Additionally, given the wider national and local support for renewable energy, and the application was considered acceptable in all other regards, the loss of agricultural land (albeit temporary) was not grounds for refusal. We consider the same conclusion can be reach for the Site subject to this application.

11. Appeal Precedents

11.1 There are examples across the UK of solar farms on BMV land being allowed on appeal. A 45MW solar farm (APP/H1705/W/22/3304561 (20/03403/FUL) in Hampshire was approved on appeal in 2023. 53% of the site for this development was on best and most versatile agricultural land (although not all of this land was covered by solar panels). In regards to BMV, the planning inspector stated that:

"While the use of higher quality agricultural land is discouraged, the proposal is for a temporary period of forty years which could be secured by a condition attached to any grant of planning permission. The agricultural land would not be permanently or irreversibly lost, particularly as pasture grazing would occur between the solar panels. This would allow the land to recover from intensive use, and the soil condition and structure to improve. The use of the soils for grassland under solar panels should serve to improve soil health and biodiversity and the proposed LEMP, which could be secured by a condition attached to any grant of planning permission, includes measures to improve the biodiversity of the land under and around the panels.

Particular concerns were raised regarding compaction during construction and decommissioning. However, the submission of a Soils Management Plan, to be agreed in writing by the LPA, is intended to minimise such impacts. This could be secured by way of a condition, as suggested by the appellant, attached to any grant of planning permission. I note that Natural England as the statutory consultee on agricultural land, raised no comments in its consultation response in this regard. Against this background, I consider that the proposal would not be harmful in respect of BMVAL and would accord with LP Policy EM8 which requires consideration of the impacts of renewable energy developments on high grade agricultural land."

11.2 As well as this, an 86.75-hectare Solar farm was allowed on appeal in Essex (Appeal ref: APP/W1525/W/22/3300222). It is worth noting, however, that only two hectares of this site was on BMV land (3a). In the appeal, the planning inspectorate noted that the proposals contribution to meeting energy goals justified its harmful effect:

"The inspector found that as this appeal scheme was larger, it would provide greater benefits in terms of renewable energy. He also said most of the agricultural land "does not meet a best

and most versatile classification", with just a small parcel of 3a-graded or "good" quality arable land, so its loss was attributed "minor harm" in the planning balance."

11.3 The following is also of relevance (Appeal Ref: APP/G2713/W/23/3315877 - Land south of Leeming Substation, west of the village of Scruton, bordering Fence Dike Lane, part of Low Street and Feltham Lane, DL7 0RG.

11.4 This appeal was allowed and is relevant given the inspector found that "*the fact that the proposal would limit the ability to carry out any arable farming does not, in my opinion, mean that it results in the loss of agricultural land when it can still be used for other agricultural uses.*"

11.5 The inspector concluded: "*as such, the proposal would not result in either the temporary or permanent loss of BMV land as the land would continue to be used for some agricultural purposes whilst also being used to produce solar energy*." The continuation of agricultural use was via sheep grazing.

11.6 Both applicant and LPA undertook ALC assessment with the LPA's suggesting that the majority was grade 2. Even with this, the inspector was not moved to deviate from what I outline above.

12. Job Creation and Economic Benefits

12.1 The proposed development would provide direct economic benefits by generating employment opportunities through the construction, management and decommissioning phases. It is anticipated that the construction phase will likely lead to approximately 20 or more jobs through opportunities for contracting work. The various roles needed for such a project include:

- Cabling;
- Fencing;
- Ready mixed concrete;
- Civil engineering;
- Ground works;
- Surveying;
- Planting;
- Landscaping
- Haulage;
- Supervisory Services; and
- Security.

As well, it is expected that the development will lead to further indirect economic benefits, such as the procurement of accommodation for workers, or by increased spending in local shops.

12.2 Regarding the post-construction phase, it is expected that the proposed sheep grazing use would see an increase in potential jobs compared to what would be available through arable cropping. A previously approved Solar Farm proposal within South Holland District Council (reference: H04-0849-22) noted in the planning statement that "*Typical staffing levels for arable cropping on the existing arable land would be c.0.25 full-time equivalent (FTE) jobs. In contrast the sheep grazing proposed under the solar panels would support c. 1.5 FTE jobs for the duration of the solar farm operations*." The solar farm proposed in application H04-0849-22 was located on land with an area of 97.3ha. This proposal is located on land with an area of 80ha, and so it is expected that these figures can indicate a similar employment allowance.

12.3 Maintenance and monitoring jobs throughout the lifetime of the proposal are also expected to provide an additional 3 jobs. Decommissioning will also lead to further job creation at the end of the proposal's lifespan.

13. Summary of Benefits of the Development

13.1 There is an urgent need to reduce carbon emissions as quickly as possible. This is recognised not only by the Government, which has set a target for the country to reach net-zero by 2050, but also by Lincolnshire County Council who have committed to being carbon neutral by 2050. South Holland District Council have also recently adopted a new Climate Change Strategy.

13.2 This application proposes to deliver 48MW of clean renewable energy that will power approximately 14,400 homes a year leading to annual carbon emission savings of around 20,640 tonnes of CO2 and making a significant contribution towards both local and national targets for carbon neutrality.

13.3 Both national and local policy encourages the development of renewable energy schemes providing environmental issues are not adverse, and if applicable, appropriate mitigation measures implemented. This Statement demonstrates that the proposal has been carefully designed to take account of national and local planning policies and the site's opportunities and constraints. Furthermore, the accompanying environmental reports demonstrate that the development will not have an adverse impact on the surrounding landscape and both the natural and historic environment.

13.4 The proposal offers a sustainable development that would bring a number of benefits, in particular significant wider environmental benefits in terms of renewable energy generation and reduction in carbon emissions. In addition, the development would bring a number of social and economic benefits, and it is, therefore, clear that it performs a positive economic, social and environmental role as required by the NPPF.

13.5 The proposed development is compliant with the NPPF and the development plan and constitutes sustainable development. On the basis of the evidence provided, and the justification set out in this Statement and other supporting documentation, it is respectfully requested that, in line with the presumption in favour of sustainable development, the application is approved without delay.

14. Summary and Conclusion

14.1 The proposed development will substantially contribute to UK renewable energy generation targets. The ALC report associated with this developed, which found that the site lies on Grade 2 agricultural land, was prepared by experienced consultants. The limited availability of non-BMV land within South Holland District Council requires that planning proposals must consider the use of high-grade agricultural land for future developments.

14.2 It is considered that the proposed use of a solar farm on this land would represent least-worst usage. Solar farms have well documented social, economic and environmental benefits, which not only outweigh the potential adverse impacts on BMV land, but in some cases even lead to overall benefits for the land.

14.3 The proposal will lead to job creation and other economic benefits which go above and beyond any policy requirement. There is also further potential for biodiversity gain on-site, by maintaining a semi-agricultural use on the land through sheep grazing.

14.4 The proposal is temporary, and is proposed for a period of 40 years. After such time, the land would be restored to its previous fully agricultural use. For this reason, it is considered that this proposal, as opposed to other more permanent forms of development, represents a substantial method of securing agricultural land long-term.

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  https://www.gov.uk/government/statistics/united-kingdom-food-security-report-2021
- **Best Practice for Managing Soil Organic Matter in Agriculture**
  https://randd.defra.gov.uk/ProjectDetails?ProjectId=15536

Appendices

Appendix 1 – Solar Energy UK Briefing Note

Overview

Claims that ground mounted solar farms jeopardise food security are false. The opposite is true, and this briefing explains the role of solar farms in supporting the food supply in Wales, as well as its contribution to wider economic and climate change objectives.

It is intended to help members of the public, Senedd Members, MPs, planning officials and others with an interest in countryside management to understand how solar energy fits into Wales' land use needs.
The briefing looks at the relationship between ground mounted solar and land use and soils, energy costs and food security.

Solar Energy UK is available to discuss the topics in this briefing at request.

Summary

- **Solar helps address climate change, which is the single biggest threat to food security**. This is according to the Westminster Government's Department for Environment, Food and Rural Affairs, which says that climate change could reduce the stock of high-grade agricultural land by nearly three-quarters by 2050. Because solar farms generate near zero-carbon electricity, they help address climate change. This means that solar can help protect, and even improve, long-term food security.

- **Solar cuts costs, which helps keep farmers in business.** Solar provides some of the cheapest electricity in history. Without solar, energy prices would be even higher. This is important, because costs are increasing for agricultural businesses, just like everyone else. Solar can also provide a direct and long-term revenue stream for farmers who choose to host a project on their land. By addressing the energy crisis, and helping to keep farming profitable, solar is also helping to secure the domestic food supply.

- **Solar preserves agricultural land and can support soil recovery.** Solar farms do not use land, they borrow it: planning permission is typically granted on the condition that a project is completely dismantled at the end of its life. As such, any land use change is temporary, and reversible. Furthermore, because agricultural land under a solar farm is in effect left fallow, soil health can recover. [i] Solar farms themselves occupy a very small area, and even with five times as much capacity as has currently submitted a planning application, solar farms would still only occupy 0.17% of Welsh land.

How does solar support food security?

1. Tackling climate change.

Evidence for the third UK Climate Risk Assessment for Wales, published in 2021, describes climate change as the number one driver impacting food production patterns. This is further supported by the UK Government Food Security Report, published in December 2021, which explicitly states that: "The biggest medium to long term risk to the UK's domestic production comes from climate change and other environmental pressures like soil degradation, water quality and biodiversity." [ii]

The report quantifies this risk, noting that under a medium emissions scenario, climate change could reduce the proportion of 'Best and Most Versatile' agricultural land from a baseline of 38.1% to 11.4% by 2050. This would mean a reduction in the UK's prime agricultural land of almost three quarters. Warmer temperatures and extreme weather patterns caused by climate change are impacting growing seasons. This in turns makes prices more volatile, and alters productivity in the long term.

The evidence is already available: for example, the drought of 2022 literally caused the potato crop to shrink. [iii] Solar farms directly address these threats by reducing carbon emissions. By helping to address climate change, solar farms are therefore helping to defend Welsh, UK and global food supply.[iv]

Solar farms also present an opportunity to address the Welsh biodiversity crisis. The industry's leadership on managing natural capital led to the development of a Natural Capital Best Practice Guidance which outlined opportunities to increase biodiversity at every stage of a solar farm's lifecycle. Well designed and well managed solar farms can deliver a variety of ecological enhancements, including new wildflower meadows, the planting and infilling of hedgerows, orchards and woodlands, and the creation of wetland features, to name a few. Planting wildflower meadows provides habitats for pollinator species such as bees and flies; research from Lancaster University shows that land on a solar farm managed for wildflowers rather than grassland can boost bumblebee numbers by up to four times. [v]

A diverse range of wildlife and environmental organisations have in addition signed Solar Energy UK's open letter on the topic of solar farms and the environment. [vi]

2. Addressing the energy crisis.

The energy crisis enveloping the country is a problem for farming and agricultural businesses as well as domestic consumers. Welsh businesses could see their bills increase by 500% in 2022. [vii] This could be a catastrophe for farmers, who are already facing major economic uncertainty. [viii]

Solar farms can address this problem in two key ways:

First, they produce some of the cheapest electricity in history. Indeed, if Welsh Government is going to achieve 70% of electricity consumption to be generated by renewable energy by 2030, solar will undoubtedly need to play a key role [ix].

The UK's 2022 renewable energy auction saw solar farms successfully bid to generate power at prices four times cheaper than gas.[x](without solar, energy prices would be even higher). This is important, because costs are increasing for the agricultural sector, just like everyone else. [xi]

Second, farmers can receive direct rental and other income if they choose to host a solar farm on part of their land. [xii] Solar farms offer long term, stable revenue, in an uncertain economic environment. [xiii] By providing financial security, solar is helping to keep Welsh farming profitable, and to allow for the continuation of traditional farming practices. Keeping farmers in business means securing Wales's food supply. [xiv]

Mr and Mrs Rasbridge, landowners, and farmers in Wales, installed a 9MW and a 6.2MW solar farm on their land in Swansea.

"The addition of solar on our land has provided us with a stable income at a time when the agricultural industry is becoming increasingly challenging. Throughout the farming cycle you only receive income when you are selling produce, however through the addition of solar, we know we can rely on the revenue every three months. Installing solar has diversified our income whilst allowing us to continue farming. We have also seen wider benefits, for example an increase in the amount of wildlife on and around the farm, which is great to see."

The ability to decarbonise assets, continue agricultural practices and diversify revenue are some of the reasons why solar projects are popular with farmers. Indeed, this was supported by Tom Bradshaw, deputy president of the National Farmers Union. "Renewable energy production is a core part of the NFU's net zero plan and solar projects often offer a good diversification option for farmers." [xv]

3. Safeguarding Wales' land and soils.

Planning permission for a solar farm is typically granted only on the condition that the project can be completely dismantled at the end of its life. As such, land use change is temporary and reversible – unlike almost all other development. The extended fallow period enables a recovery of soil health, degraded through many years of cultivating arable land. This in turn increases the amount of organic matter and allows for greater soil carbon sequestration. Further, solar farms can support continued use of agricultural practices as farmers make use of livestock to help graze the grass around the panels itself, supporting a functioning, productive soil remains in place. [xvi]

Solar farm developers, builders or tenants who are members of Solar Energy UK also agree to comply with the industry's 11 commitments on good land management, respecting landscape, local heritage and access and community engagement, to ensure projects are developed responsibly. [xvii] A further best practice guidance focusing on solar farm planning and community engagement is now under development, as the solar industry continues to be a responsible steward of the countryside and advocate for supporting rural communities.

It should be noted that solar farms, which are hugely popular, occupy a minuscule proportion of Welsh land. [xviii] Even if projects are built with five times as much capacity as those which have currently submitted a planning application, they would still occupy only 0.17% of Wales' total land area. [xix] This is a small amount of land needed to help improve energy security. More solar means more home-grown energy, resulting in less dependence on Russia and the Middle East.

This is patently in the strategic interest of Wales, although it is just one of the many benefits of solar technology. Solar farms reduce our carbon footprint, displace extortionate fossil fuels, cut bills, create jobs, benefit nature, and bolster the nation's energy security. [xx]

[i] Defra R&D project SP08016 Best Practice for Managing Soil Organic Matter in Agriculture. Seehttps://randd.defra.gov.uk/ProjectDetails?ProjectId=15536

[ii] https://www.gov.uk/government/statistics/united-kingdom-food-security-report-2021/united-kingdom-food-security-report-2021-theme-2-uk-food-supply-sources#united-kingdom-food-security-report-2021-theme2-indicator-2-1-1

[iii]https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1077015/United_Kingdom_Food_Security_Report_2021_19may2022.pdf and https://www.theguardian.com/environment/2022/aug/12/mass-crop-failures-expected-in-england-as-farmers-demand-hosepipe-bans?CMP=Share_AndroidApp_Other.

[iv] Solar farms produce near zero-carbon electricity. See https://www.carbonbrief.org/solar-wind-nuclear-amazingly-low-carbon-footprints/.

[v] Blaydes H., Gardner, E., Whyatt J.D., Potts S.G., & Armstrong A. 2022, Solar park management and design to boost bumble bee populations. Environmental Research Letters – http://www.research.lancs.ac.uk/portal/en/publications/-(2f23dd74-a7d7-42eb-9024-a575f0c9035f).html

[vi] https://solarenergyuk.org/wp-content/uploads/2022/09/28.09.2022-SEUK-Joint-Letter-on-Land-Use.pdf

[vii] https://www.cornwall-insight.com/press/businesses-could-see-energy-bills-increase-fivefold-in-october/

[viii]The situation is so serious that in 2022 the government had to bring forward the cash payments it provides in England as part of the Basic Payments Scheme: https://www.gov.uk/government/news/payments-brought-forward-to-help-farmers-with-cashflow. See also the 2022 Farmers Weekly state-of-the-industry survey, which reported that seven out of eight farmers "had no clear idea" how their business would survive without the BPS: https://www.fwi.co.uk/business/business-management/agricultural-transition/survey-farms-hampered-by-uncertainty-over-future-income.

[ix] https://gov.wales/sites/default/files/publications/2022-06/energy-generation-in-wales-2020.pdf

[x]Seehttps://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1088875/contracts-for-difference-allocation-round-4-results.pdf and https://www.carbonbrief.org/analysis-record-low-price-for-uk-offshore-wind-is-four-times-cheaper-than-gas/.

[xi] It should be noted that an additional economic challenge for UK agriculture, and something which is causing food insecurity, is the labour crisis in the sector. The Westminster Parliament's Environment, Food and Rural Affairs Committee said in March 2022 that it had found "clear evidence that labour shortages have badly affected the food and farming industry – threatening food security [...and...] causing crops to go unharvested and left to rot in fields." See https://committees.parliament.uk/publications/9580/documents/162177/default/.

[xii] For an example of a landowner FAQ from a solar developer, see https://jbm-solar.com/faqs/.

[xiii] https://www.thetimes.co.uk/article/farmers-fear-devastating-effect-of-solar-power-restrictions-zmnrd27g8.

[xiv] Many farming businesses also choose to install rooftop solar panels, which Solar Energy UK strongly supports. See, for example, https://www.bbc.co.uk/news/uk-england-gloucestershire-62437048, and https://solarenergyuk.org/wp-content/uploads/2022/06/CBGuide_June2022.pdf for a guide to commercial rooftop solar.

[xv] https://www.cityam.com/leading-farming-union-defends-solar-panels-from-tory-attacks/ Examples of diversification stories. https://www.thescottishfarmer.co.uk/diversification/20071963.energy-costs-soar---even-scotland-comes-sun/, https://www.walesfarmer.co.uk/news/20297233.pembrokeshire-farmer-wins-woman-farmer-year-title/ and https://www.nfuonline.com/updates-and-information/solar-farms-and-the-british-landscape/. A guide to commercial rooftop solar is available at https://solarenergyuk.org/wp-content/uploads/2022/06/CBGuide_June2022.pdf.

[xvi] https://www.bbc.co.uk/news/uk-england-humber-62352061

[xvii] https://solarenergyuk.org/wp-content/uploads/2022/08/11-Commitments-on-Solar-Farms-_-Final.pdf.

[xviii] There is extensive and up to date industry, government and private sector polling which demonstrate solar's enormous popularity, including solar farms. See, for example, https://solarenergyuk.org/wp-content/uploads/2022/01/Copper-Consultancy_Solar-Energy-UK_Public-attitudes-to-solar_January-2022.pdf, https://solarenergyuk.org/wp-content/uploads/2022/01/Copper-Consultancy_Solar-Energy-UK_Public-attitudes-to-solar_January-2022.pdf, and https://www.businessgreen.com/news-analysis/4053952/tory-members-stronger-green-energy-policies-sunak-cools-heat-pumps.

[xix] Based on an assumed additional 2.43 GW of ground-mounted solar, occupying an average of 3 acres / MW (figure via BEIS: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1015236/en-3-draft-for-consultation.pdf). Wales' total land area is 2.1 million hectares (see https://www.bbc.co.uk/news/uk-wales-46737277). As solar technology improves, the land area required for a given generation capacity continues to decrease.

[xx] The UK solar industry is, in general, a job-creation machine. Solar Energy UK analysis shows the UK solar industry could support 60,000 jobs by 2035, with corroborating evidence from, for example, the UK Energy Research Centre, and Green Alliance. See https://ukerc.rl.ac.uk/UCAT/PUBLICATIONS/UKERC_Green-job-creation-quality-and-skills_A-review-of-the-evidence_Final.pdf and https://green-alliance.org.uk/wp-content/uploads/2022/07/Powering-the-labour-market.pdf respectively.