



SOLAR CAMPAIGN ALLIANCE

Written Representation regarding LONGFIELD SOLAR FARM NSIP

Executive Summary

1. Introduction
2. Further to the Solar Campaign Alliance's (SCA) Relevant Representation, this section details of the lack of compliance of Longfield solar farm with the National Planning Policy Framework (NPPF). It also considers the lack of compliance of this application with the agreed commitments of members of the trade association, Solar Energy UK, of which the developers behind Longfield are members.
3. Gives details of the lack of compliance of this application with Government policy more generally
4. Outlines the SCA's further concerns at the grading of the agricultural land in the scheme and the assumptions made by the applicant
5. Details concerns about the impact of Longfield on the UK's food security, since it represents a loss of a significant amount of high quality farmland (including what is known as 'BMV')
6. Comments on the sheer number and scale of solar developments on high quality farming land that are currently in the pipeline, and how this is likely to impact the UK's food security. We ask that Longfield should be considered in the context of this surge in applications and the cumulative impact of ground-mounted solar schemes on high quality agricultural land across the UK should be taken into account

1. Introduction

My name is Dr Catherine Judkins and I am submitting this Written Representation on behalf of the Solar Campaign Alliance (SCA, [REDACTED]). The SCA currently represents over 50 individual community groups across the UK, who are campaigning to ensure that their concerns about ground-mounted solar farms on greenfield land in their areas are heard. The groups in the SCA are affected by a mixture of 'mega scale' ground-mounted schemes on greenfield land (Nationally Significant Infrastructure Projects, NSIPs) such as Longfield, Sunnica, Mallards Pass, No Solar Desert etc, and also other schemes that are being considered through local planning authorities.

Members of the SCA are not anti-solar or anti-renewable energy. Indeed, they recognise and support the importance of renewable energy sources in the UK and recognise that solar PV (if deployed appropriately) has a part to play as part of the renewable energy mix.

However, the SCA opposes the inappropriate development of solar PV on greenfield land across the UK, and is particularly concerned about the lack of a coherent strategy to ensure that valuable farming land is protected and to ensure that a careful balance between food security and energy security is delivered. We are calling for a proper land use strategy to be put into place as a matter of urgency and for our food security to be considered as a key factor when considering development on greenfield land.

The current number of solar applications on some of the UK's most valuable farming land is a huge concern and the scale of the projects being proposed will inevitably cause a decline in our food security – a position that we cannot afford to create. The current potential land loss amongst the current groups in the SCA alone represents a loss of over 22,800 acres of high quality farmland (over 9000 hectares), and more groups are joining the alliance each week.

There are also other developments (housing, commercial, other solar etc) that are being built on valuable farming land, so this all adds up to a very significant loss of food producing land in the UK.

When it comes to solar PV, the SCA believes that rooftop installations can offer a considerable amount of solar PV output, which can be installed relatively quickly and do not compromise farming land (our neighbouring countries such as Germany have demonstrated this). According to research by the BRE National Solar Centre there are an estimated 250,000 hectares of unused south facing commercial rooftops alone. This in addition to the many domestic rooftops.

We also strongly believe that if ground-mounted solar PV is deployed it should be on “previously developed or lower value land,” as outlined in the Energy Security Strategy that was published earlier this year.

The SCA previously outlined its main objections to the Longfield proposal in our Relevant Representation (RR) under the following categories (more details can be seen in the RR):

1. Lack of compliance with the National Planning Policy Framework (NPPF)
2. Inadequate assessments of more suitable land in the vicinity of the scheme and of land quality. Concern over loss of high quality farmland
3. Insufficient assessments on biodiversity net gain – the SCA does not accept the metric used to measure biodiversity and believes that the very limited research on biodiversity on solar farms indicates a damage to wildlife and ecosystems. There is potential damage to allow such large scale solar proposals to go ahead with unknown environmental consequences due to the distinct lack of research in this area.
4. Adverse effects on the landscape
5. Dangers of fire and explosion from thermal runaway in BESS systems. Current regulations are inadequate to address this. We believe that Hazardous Substances Consent (HSC) must be applied for as part of the DCO application. Research indicates that Lithium-ion BESS contain hazardous substances that fall under this requirement, and they should be more tightly regulated (Ref 1).
6. Potential noise pollution and access concerns.

In addition to the submissions in our RR, the sections below provide some additional details relating to objection points 1 and 2 above, which we feel warrant particular consideration in view of the current food shortages and recent policies on energy security and food security.

2) National Planning Policy Framework (NPPF)

- The updated NPPF was released in July 2021. The Longfield proposal conflicts with the updated NPPF, which includes a strengthening of the environmental objective that requires sustainable development to protect and enhance our natural, built and historic environment. This includes making effective use of land and improving biodiversity. The use of over 1000 acres greenfield land for this “mega scale” scale solar and battery development conflicts with NPPF Chapter 11 (Para 119) as it does not make effective use of land. The land currently sustains a range of high yielding arable crops and grassland. Covering such valuable land in solar PV is not an effective use of the site.

- Longfield also conflicts with NPPF Chapter 15, specifically paras 174-175 and 183, which cover ‘Conserving and Enhancing the Natural Environment.’ It is made clear that the economic and other benefits of best and most versatile (BMV) land *must* be taken into consideration and that such land should not be developed unless there are exceptional reasons. We do not consider there to be any exceptional reasons why Longfield should be approved on BMV land. There are other sites that could be more suitable but which have not been considered. In the Longfield documentation there is a map which indicates ample low-grade land within the vicinity of the 400Kw NETS power line, but which has not been considered. We know that there are 70,000 acres of ‘poor grade’ farmland in Essex and feel that the Longfield site seems to have been chosen for the convenience of a single site with one owner rather than properly assessing the use of land and alternatives.

This NPPF policy section also clearly states that planning policy and decisions should protect and enhance valued landscapes.

Aside from lack of compliance with the NPPF, it is also noteworthy that the UK's solar trade association, Solar Energy UK, SEUK (of which the developers behind Longfield are members) state in their 10 commitments for solar farms that:

1. *We will focus on non-agricultural land or land which is of lower agricultural quality.*
2. *We will be sensitive to nationally and locally protected landscapes and nature conservation areas, and we welcome opportunities to enhance the ecological value of the land.*
3. *We will minimise visual impact where possible and maintain appropriate screening throughout the lifetime of the project managed through a Land Management and/or Ecology plan.*
4. *We will engage with the community in advance of submitting a planning application.*
5. *We will encourage land diversification by proposing continued agricultural use or incorporating biodiversity measures within our projects.*
6. *We will do as much buying and employing locally as possible.*
7. *We will act considerately during construction, and demonstrate 'solar stewardship' of the land for the lifetime of the project.*
8. *We will seek the support of the local community and listen to their views and suggestions.*
9. *We commit to using the solar farm as an educational opportunity, where appropriate.*
10. *At the end of the project life we will return the land to its former use.*

SEUK also clarify that "ground-mounted solar should ideally utilise previously developed land, brownfield, contaminated land, industrial land and preferably agricultural land of classification 3a, 3b, 4, and 5 (in most instances avoiding use of the "Best and Most Versatile" cropland where possible). Land selected should aim to avoid affecting the visual amenity of landscapes, maintaining their natural beauty, and should be predominantly flat, well screened by hedges, tree lines, etc., and not unduly impact upon nearby domestic properties or roads" (reference source: Solar Farms: 10 Commitments • Solar Energy UK).

Longfield appears to be in conflict with these commitments – especially points 1 and 2 - for appropriate solar developments.

- The Longfield development will cause harm to the context and setting of local heritage assets which makes the application contrary to NPPF Chapter 16 – Conserving and Enhancing the Historic Environment, paras 189, 194, 195, 199 and 200. Longfield also conflicts with the updated NPPF's emphasis on preserving tranquillity (Chapter 15, para 185. Identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason) and the Government planning guidance regarding noise and existing areas of tranquillity.

3. NPPF Link and Lack of Compliance with broader Government Policy

Government policy has consistently aimed to protect valuable farmland. The recent Energy Security Strategy (7th April 2022) discussion of solar states that, "We will continue supporting the effective use of land by encouraging large scale projects to locate on previously developed or lower value land". Longfield is on high quality farmland.

More recently still, the Government produced a Food Strategy (13th June 2022) in which it states that

“It is possible to target land use change at the least productive land” (Para 1.2.2). Historically, the policy to protect valuable farmland can be traced back much further - the NPPF of March 2012 (paragraph 112) states that “economic and other benefits of the best and most versatile agricultural land” should be taken into account. It goes on to say that where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality and in preference to that of higher quality.

The Government also re-affirmed the importance of protecting our soils and the services they provide in the Natural Environment White Paper *The Natural Choice: securing the value of nature* (June 2011), including the protection of best and most versatile agricultural land (paragraph 2.35).

A further example is provided in the letter below written by Eddie Hughes MP, then Minister of Housing, Communities and Local Government, who wrote a letter to Kemi Badenoch MP on 2nd June 2021 stating, “There are strong protections in place within national planning policy which guards against inappropriately sited solar farms...expects local authorities...to take account of the benefits of the best and most versatile farmland, to enhance the biodiversity and recognise the character and beauty of the countryside....Where a proposal involves Greenfield land, local councils are expected to consider whether the proposed use of any agricultural land has been shown to be necessary. Where high-quality agricultural land is involved, this would need to be justified by the most compelling evidence. We have been clear that the need for renewable energy does not automatically override environmental protections and the planning concerns of local communities, and that the views of local communities should be listened to....Where relevant planning considerations are raised by local residents these must be taken into account by the local council.”

It is clear that Government policy continues to strive to protect valuable farming land. The Longfield development should be rejected as it is clearly on high quality farming land.

4. Loss of Farmland and Agricultural Land Classification (ALC) for Longfield

The ALC for the proposed Longfield Solar Farm on the 1:250000 maps showed the entire site to be ALC grade 2. As such, the entire site would be classified as Best and Most Versatile (BMV) and should be protected. We accept that the ALC maps are acceptable for strategic purposes but that developers should carry out a detailed ALC for specific developments.

The applicant’s survey covered 637.6 hectares, which was the original site proposed for the solar farm prior to the non-statutory consultation. The site for solar panels was then redefined as 432 hectares in the revised public consultation document. The survey resulted in a significant downgrading of Grade 2 land to Grade 3a and Grade 3b, resulting in a reduction of the proportion of BMV land (based on the Natural England definition 2021 that BMV = Grades 1, 2 and 3a). Even so, a high proportion of BMV land per this definition, would still be retained. This should not be developed.

It should be noted here that there currently appears to be some confusion regarding how BMV land is defined:

In 2015 the Ministry for Housing & Local Government (MHCLG) issued guidance on Best and Most Versatile Land (BMV) and that was classified as *Grade 3b and above*. This conflicts with Natural England’s 2021 position that BMV is Grade 3a and above.

In February 2019 a question was addressed to DEFRA by Rosie Cooper M.P. The reply from George Eustice was that BMV is classed as Grade 3b and above.

This was re-affirmed during a meeting on 29th June 2022 of the Environmental Audit Committee of the House of Commons. The transcript of the dialogue between James Gray MP and George Eustice SOS DEFRA is as follows:

Q8 **James Gray:** Very briefly on a remark you made a moment ago, have you had recent discussions with the Department for Planning? I had a letter from it yesterday indicating it thought that grade 3b land was perfectly acceptable for solar. Is that right or not?

George Eustice: It is not right. This is something that we are discussing across Government at the moment. I looked at this issue in some depth in about 2015 when we had something of a solar rush at that time. We agreed with the then MHCLG that its chief planning officer would issue guidance to planning authorities that created a strong presumption against solar farms on the best and most versatile land and that is classified in law as grade 3b or above. Grade 3b land is classified as BMV land, best and most versatile.

Q9 **James Gray:** That needs to be clarified. At the moment DCLG is saying 3b is allowable for solar and you have said the opposite, so it needs to be clarified within Government. I think your point that 3b is not acceptable is spot on and absolutely right.

George Eustice: We issued this guidance, as I said, about six or seven years ago and this problem was resolved for some time. We are conscious that there have been a few quite big schemes in recent months or over the last 12 months where planning authorities seem to have either forgotten or started to disregard that advice. I don't think that new guidance was issued by MHCLG but if, as you say, it doesn't understand the legal definition of BMV land obviously we will that up with it, but 3b constitutes BMV land.

Since this latest meeting, members of the SCA have asked several MPs if the above represents government policy. Several have confirmed that it does, including James Gray MP, who said that "Hansard speaks for itself and is decisive in a court of law" and Sir Oliver Heald MP (QC) who said that, "The Minister's statement in the House of Commons proceeding and recorded in Hansard can be relied on as a statement of Government policy."

It should therefore be concluded that land of Grade 3b and above is considered BMV in Government policy. So the entire Longfield site should be considered BMV land and should not be developed for solar. Particularly as there is lower grade land in the area.

5. Longfield Connection with Current Conflicts between Land Use and Food Security

The average loss of the UK's agricultural land has been assessed at 40,000 hectares (96,000 acres) a year and rising. This figure is potentially much higher, with woodland targets set at 30,000 hectares a year, and infrastructure projects and housing expanding and increasing demand for land.

A study by the UK Centre of Ecology and Hydrology suggested a loss of two million acres between 1990 and 2025, and a study by the University of Cambridge 2014 suggested a farming land shortfall of two million hectares (4.8 million acres) by 2030. Every projection shows that loss of productive land and new environmental schemes, while fundamentally a good thing, will reduce food productivity; the same applies to woodland areas. Land being used for energy purposes, e.g., the production of biofuels or for solar farms, will further reduce the food-growing areas (the tally for proposals in the SCA alone are over 22,800 acres and there are many more solar schemes in the pipeline).

Climate change and food production: A report from the University of Minnesota in conjunction with other universities has stated that the world's top 10 crops (barley, cassava, maize, oil palm, rapeseed, rice, sorghum, sugar cane, wheat) supply 83% of all calories produced on crop land. They state that yields have long been projected to decrease and that new research now shows that climate change has already affected production of these key energy sources. The average reduction is 1% and the impacts are greatest in Europe, Southern Africa and Australia. A UN report in 2019 stated that 10% of the world's population was undernourished and "climate change will accelerate the rate of severe food shortages". A report from The European Environment Agency in the same year said "Crops and Livestock production is projected to decrease and may even have to be abandoned in Europe's southern and

Mediterranean regions..... any benefits would be outweighed by the increase in extreme events negatively affecting the sector.”

Specific examples in Europe include Spain where two thirds of the country is considered to be vulnerable to increasing desertification and accelerated soil erosion. Many African countries will be severely affected, for example 98% of Kenya’s agricultural activity is rain fed and highly susceptible to climate change. In the USA research (USDA Tech Bull. 1935) indicates that climate change will lead to a decline in yield and nutrient density in key crops as well as decreased livestock productivity.

Impact on the UK: A report on food Security in the House of Commons library published in 2020 states that climate change will produce significant risks to UK food supply. The government Energy White Paper (December 2020) states that if there were no further temperature rise then 15% of UK land is classified as poor. If temperatures rise by 4 degrees centigrade then this poor land would increase to 70% of the total leading to a massive decline in UK food production.

A risk assessment produced for parliament (June 2022) emphasised the changes to food importation as a result of climate change.

40% of all food consumed in the UK is imported (25% of indigenous food types). 30% of all the food that is imported comes from the EU. 19% of fruit and vegetables come from Spain and 11% from the Netherlands. Overall, 45% of vegetables are imported and 84% of fruit, 4% of food imports come from Africa, with Kenya and South Africa being the dominant countries. A further 4% of food imports come from North America and 4% from South America. The majority of wheat the UK imports comes from the EU. 15% of wheat for flour is imported.

Analyses of imports against climate change impacts suggests that several countries the UK imports from will face problems; these include the EU and Spain in particular. Africa and especially Kenya and South Africa will also be hard hit by climate change. There will also be significant impacts in Australia and some South American countries. The overall food importation level is complex and is further affected by population growth and levelling off of crop yields, fragility of supply chains and a range of other factors. The war in Ukraine has added to the problems and complexity.

If more of the UK’s farmland is lost to development (and particularly to solar development which requires large areas of land) it is highly likely that the UK will need to import more food, and this will become more difficult and more expensive as other countries feel the impact of climate change.

The Longfield development should be rejected as it constitutes a loss of a significant amount of valuable farming land which must be kept in food production to maintain our food security. There are alternatives (lower grade land areas, brownfield sites and rooftops etc) that do not pose such a threat to our food security.

6. Number and Scale of Solar Farms across the UK on farmland

Longfield Solar Farm, if approved, would occupy a large area of Essex. But schemes such as this should be viewed in a national context which will reflect the cumulative effect of all the solar farm proposals in the country and the impact on food production.

There do not appear to be any accurate statistics available on the cumulative impact. SEUK claims that only .1% of UK land is under solar panels (ca. 56,000 acres, most of which would be on farmland in England). The Energy Security Strategy paper states that there is currently 14GW of solar capacity in the UK. If 1GW requires 5000 acres land, it follows that 14GW would require 70,000 acres of land (approximately 30,000 ha).

The issue is the potential loss of farmland as solar farms grow in numbers. The Energy Security Strategy states the Government expects a five-fold increase in solar by 2035. This would require an additional 350,000 acres which is 3% of the cropable area of England. This would impact food production, particularly since land loss is increased in many other ways.

In England there are 21 million acres of agricultural land. If 39% of this area is Grade 4 & 5, this means that 8 million acres of 'poorer quality' land is potentially available for development.

Given this background, the SCA cannot accept that there is not more suitable land for development, so it is unclear why Longfield are choosing to use this location, on BMV farmland, and not properly assessing alternative sites.

7. References

Ref 1: Hazardous Substances potentially generated in "loss of control" accidents in Li-ion Battery Energy Storage Systems (BESS) : storage capacities implying Hazardous Substances Consent obligations (researchgate.net)