Summary comments by SGHS on land use, design inefficiencies and cumulative impacts of GHS.

The applicant intends to take 3,560 acres (1,441ha) of land out of agricultural production, approximately 65% of which is classed as BMV land (NLC Grades 1-3a), for at least 60 years. We do not propose to repeat all the evidence and arguments previously submitted by Stop GHS, in particular in REP1-221 (Objection on Agricultural Issues) to REP1-227. Instead we summarise some key points as follows.

1. **National food security** is increasingly under threat due to climate change, geopolitical and economic instability, population rise, and increasing land take for new infrastructure projects and housing. (See *Additional Evidence 1-3* below). The UK's ability to feed its people will be incrementally reduced by every new field of PV arrays, especially on currently productive land as is being proposed by the Applicant. This will contribute to higher food prices and increase the carbon cost of feeding the nation.
2. Even with the sparsely populated Scottish Highlands, the UK has the 16th or 17th highest **population density** (around 285 per square Km) among countries of more than 10 million globally and the third highest in Europe (countries with population over 1 million) and 4-5 times the global overall population density *(World bank and Food and Agriculture Org. of the UN)*. England on its own, with a density of around 450 per sq Km, ranks a close 2nd in Europe and 8th globally (>10 million popn). Productive agricultural land is therefore at a premium in the UK and likely to become more so (See Additional Evidence, below).
3. There are many persuasive and wide-ranging environmental arguments to support a move towards **regenerative agriculture** in the UK. However, this is associated with significantly reduced productivity - at least in the short to medium term *(Savills Research 8 Feb 2021).* Therefore any reduction in land area under tillage will further threaten our national food security. It will also increase pressure to persist with intensive techniques on remaining agricultural land, with all the consequent environmental damage, including CO2 release, and increasing reliance on imported chemical fertilisers. This is in itself another threat to our food security in an unstable world and is likely to increase food prices.
4. In relation to total land area in the UK, a **disproportionate acreage of BMV (grades 1-3a)** - and other lesser grade but still productive land - is currently being taken out of production for solar arrays and associated infrastructure. This is presumably because the most productive agricultural areas have more sunlight, fewer national parks, and larger fields which make solar installations easier and cheaper to construct, thus increasing the developer's profit. This goes against government guidance (NPPF) which states that lower grade land should be prioritised for solar development where possible. *The applicant has not given any convincing evidence that it has made a serious attempt to follow this guidance*.
5. Breaking up areas of farmland land by inserting fields of PV arrays will inevitably increase the distances which farmers and agricultural contractors need to travel in order to get maximum use from their very expensive machinery. This will reduce agricultural efficiency, **increase food production costs** and may render some agribusinesses non-viable. We feel that this may prove to be a hidden societal cost of the increasing number of solar developments taking place in the heartland of the UK cereal production.
6. The Applicant states that 'Arable fields occupy the vast majority of land within the cable route corridor and are of little ecological value, therefore no reinstatement protocol is required.' *(Outline Ecological and Mitigation Strategy (Revision B) 7.6.1).*This does not take into account the likely ecological improvements which, in the absence of Green Hill Solar, would otherwise be made in this same arable land during the coming decades, through regenerative practices. We would therefore contest their assertion about need for a **reinstatement protocol**.
7. Potential for **toxic leaching from abandoned underground cables and doubtful return to agricultural use after decommissioning**. On 24 August 2024 Bedford Borough Council (BBC) submitted detailed comments to the Planning Inspectorate with regard to the Green Hill Solar planning application. We include the following self-explanatory excerpt from page 12 of the BBC report: ' 4.12 (§4.4.15) BBC is NOT supportive of leaving the underground cables and ducting in situ. The ducting and cables contain plastics and metals which are toxic and with gradual breakdown have the potential to leach into the surrounding ground and groundwater causing contamination. The Applicant should be obligated to return the Sites, Cable Corridors and possible servitudes within the Public Highways used by the Proposed Development, free of such known contamination. It is noted that the statement '*to be left in-situ to minimise adverse environmental effects*' is not substantiated. 4.13 (§4.4.17) '*…the land within the scheme will be returned to its original use as far as possible…*'. It is noted that during the operational stage (circa 60-years), the soil will lie fallow / be unproductive. There is no evidence submitted by the Applicant that after decommissioning the site will revert to arable use for food production / habitat creation. Currently there is limited evidence as to how long it would take to revert the soil back to production potential (see §8.4.3 Habitat Loss). Consequently, the soil should be viewed as lost to agricultural use, unless otherwise evidenced by the Applicant.'
8. **Inherent inefficiencies and cumulative impacts of site design.** This project is comparatively large by UK standards, covering 3,560 acres (1,441ha) over multiple sites with an irregular linear layout stretching from Lavendon to Old, more than 22Km in a straight line. The Applicant has claimed that this design results in a lower impact on local communities because individual sites are smaller. We would argue that this is simply an attempt at post hoc justification. They are forced to make this claim simply because they were *unable* to make the site more compact, efficient and cost-effective. While the impact on any single community might be reduced, the *totality* of negative impacts and inefficiencies is greater for the following reasons. Compared to a more compact development it requires a much longer total perimeter enclosure and cable route in order to connect to the substation at Grendon. This in turn requires more access points, more perimeter infrastructure and screening to secure and conceal them, and a **much larger total cable excavation area and access track construction**. Apart from being an **inherently**

inefficient design, this will result in higher carbon cost and more widespread disruption and damage to local landscapes, habitats, soil structure, public amenity and road safety. We have a duty to protect these assets for future generations who can have no influence in the design of this project. Negotiations with a greater number of landowners, compulsory purchase orders, highway and river authorities etc will complicate the process (cabling will need to cross the A43, A45, A509, many smaller rural roads and tunnel under the river Nene). With a planned 60 year operation it will be effectively permanent with significant amounts of infrastructure never removed. Furthermore, when travelling across country, for example on a drive of roughly 32km from Lavendon to Old, via Easton Maudit and Grendon, taking as straight a course as possible, would necessitate seeing solar arrays and infrastructure for virtually the entire 40 minute journey, and even further north as far as Lamport and Mawsley. The *cumulative site impact* of this, and traffic disruption during construction and decommissioning, will be severe and highly detrimental. (For further details on Landscape and Visual Impact, including PROWs and relevant photographs, please see earlier submissions: Rep1-204 and Rep1-203).

9. **Sheep**. There are UK examples of 'solar grazing' with sheep. This enables grass around solar installations to be controlled with less mowing and can provide supplementary income to those farmers who undertake it. It is much promoted by solar developers and is proudly featured in every solar brochure. However, this is unlikely to be successful in terms of commercial *food production* given the huge scale of proposed land take by solar developers in the UK and a lack of necessary skills, infrastructure and market demand. The UK has been self-sufficient in sheep meat every year since 2017. In 2023 home-fed production was 114% of supply for use in the UK. (*House of Commons Library debate pack on the Future of Sheep Farming 28 August 2024*). **Nor does it not address a fundamental problem of this development which is the of loss of cereal production**. This, of course, is the bedrock of our national food security - increasingly under threat and something we cannot afford to lose (see Additional Comment 2 below).

Additional evidence - from three recent UK Gov. reports.

1. **Farming Profitability Review 2025.** Published by Defra on 18.12.25. This independent report, led by Baroness Minette Batters, presents a detailed analysis of the current state of UK agriculture and a number of recommendations which were designed to be 'consistent with the UK Carbon Budget Framework, as set out in the Climate Change Act, the Environmental Improvement Plan 2023 and to consider alignment with net zero objectives'. Broad in scope, it provides a detailed assessment of short, medium and long-term actions required to strengthen farming profitability and the place of agriculture and rural affairs in UK society. We suggest reading the full report but we include below (in italics) a few excerpts from the recommendations which are relevant to this application, with bold highlights added by SGHS for emphasis. Nowhere does the report recommend installation of large scale solar arrays on greenfield sites.

*"This Government has made a commitment that **food security is national security**. This is an important first principle to establish but it needs to be implemented and embedded, with a long-term plan for farming and food production, that sits alongside restoring nature's recovery.*
…raising levels of productivity and incentivising resilience by optimising food production.
…The intrinsic metric for the 10 Year Health Plan for England should be increasing sales of fresh whole food, grown here, including the production and consumption of more fruit and vegetables.
…The core focus of my recommendations is to restore balance between food production and the environment. They should be treated as two sides of the same coin.
…help tackle climate change and the sustainable management of natural resources…
*…**maintain rural areas and landscapes**…*
*…**keep the rural economy alive by promoting jobs in farming, agriculture-food industries and associated sectors…***
…restoring whole foods as the foundation of our national diet, increasing production and consumption of fruit and vegetables and nutrient dense foods. Local food requires local processing, providing jobs, boosting local economic growth and tourism.
…Growing exports 30% by 2030.
*…**recognising the economic value of allied businesses, and people working within the rural economy and enabling on-farm tourism, health and wellbeing**…Restoring whole foods as the foundation of our national diet as an intrinsic metric of the Ten-Year Health Plan for England.*
*…grow the British brand at home and abroad: by **growing, making, producing, creating and selling more from our farms** in a measurable way.*
*…establishing a Whitehall blueprint for on-farm infrastructure: 'Planning for Farming's Future', delivering better environmental and animal welfare outcomes. **Rooftop clean energy, turbines** and on-farm reservoirs.*
***…By building resilience, optimising food production, with less impact**, at lower cost. Achieve goal-orientated commercial research on soils and nutrients. Scale circular economy proteins: peas and beans for human and livestock consumption, replacing our reliance on imported soya.*
*…**creating beautiful green spaces for everyone, everywhere**.*
*…In an age of global insecurity and cyber-attacks, **building local food resilience** is equally essential to support our national, just-in-time food distribution network.*
***…Without a strong, profitable domestic farming sector, we are not food secure,** having to rely on frequently volatile international markets for the food we eat. Currently we produce only 65% (2024) of all food purchased domestically and in recent decades UK farming has supplied a decreasing proportion of the UK's food, falling from 78% in 1984.*

*…**improving soil health through regenerative farming practices could produce more nutrient-rich and microbial-dense food. These practices can have additional environmental benefits such as increasing carbon sequestration and improving biodiversity.** Rewarding farmers for adopting these practices could see benefits for nutrient quality, farming profitability, and the environment. **Source:** Displacing Empty Calories with Nutrient Dense Food: How can UK farmers be rewarded for practices that promote nutrient density? Dr Hannah Fraser.*
…Ensuring alignment with the Food Strategy priorities and restoring English whole foods as the foundation of our national diet as an intrinsic metric in the 10yr Food Strategy.
*…**Encouraging seasonality, healthy diets, nutrient density and reduced food miles**.*

4.13.2 Energy and Connectivity
***To deliver a resilient, low-carbon rural economy, it is essential that farm businesses are empowered to generate, store, and manage their own renewable energy.** The current planning process impedes farmers' ability to contribute more directly to local and national energy security by making it more challenging to invest in on farm renewables like wind turbines. Removing barriers in this area aligns Government's commitment to expand renewable generation capacity."*

[Note: this encourages **small-scale local renewable energy generation under farmers' control**, not large-scale, owned and operated by multi-national banks etc].

*Source: **Farming Profitability Review 2025**.*

2. **Global biodiversity loss, ecosystem collapse and national security. A national security assessment.**
Published by Defra on 20 January 2026.

This strategic report, developed by analysts and experts across HM Government, including the Joint Intelligence Committee, presents an analysis of how predicted global biodiversity loss and ecosystem collapse could affect UK national security. Its key judgements are, we believe, relevant to this Application and clearly extremely concerning. It shows how environmental degradation can disrupt food, water, health and supply chains, and trigger wider geopolitical instability. It identifies 6 major global ecosystems of strategic importance for the UK and explores how their decline could drive cascading global impacts.

While the Applicant would doubtless argue that solar power generation can be part of the solution, we would argue that in terms of **UK security priorities**, and taking into account the increasing threats to national food security and the negligible contribution that this solar development would make towards reducing global net carbon emissions, logic dictates that **productive UK farmland should be prioritised for sustainable regenerative agricultural crop production,** not for inefficient, unreliable and expensive electricity generation.
The italicised excerpts below are quoted from the report with bold highlights added to indicate particular relevance to our concerns about greenfield solar developments such as Green Hill Solar.

Some 'Key Judgements' from the report

"1. Global ecosystem degradation and collapse threaten UK national security and prosperity. The world is already experiencing impacts including crop failures, intensified natural disasters and infectious disease outbreaks. Threats will increase with degradation and intensify with collapse. Without major intervention to reverse the current trend, this is highly likely to continue to 2050 and beyond.
2. Cascading risks of ecosystem degradation are likely to include geopolitical instability, economic insecurity, conflict, migration and increased inter-state competition for resources.
3. Critical ecosystems that support major global food production areas and impact global climate, water and weather cycles are the most important for UK national security. Severe degradation or collapse of these would highly likely result in water insecurity, severely reduced crop yields, a global reduction in arable land, fisheries collapse, changes to global weather patterns, release of trapped carbon exacerbating climate change, novel zoonotic diseases and loss of pharmaceutical resources…
4. Ecosystem degradation is occurring across all regions. Every critical ecosystem is on a pathway to collapse (irreversible loss of function beyond repair)…
7. Without significant increases in UK food system and supply chain resilience, it is unlikely the UK would be able to maintain food security if ecosystem collapse drives geopolitical competition for food. The UK relies on imports for a proportion of both food and fertiliser and cannot currently produce enough food to feed its population based on current diets. Countries best placed to adapt are those that invest in ecosystem protection and restoration, and resilient and efficient food systems.
*…The UK is unable to be food self-sufficient at present, based on current diets and prices. Full self-sufficiency would require very substantial price increases for consumers, as well as improvements in efficiency, waste reduction and resilience across the food system, including **agricultural production**, food processing, distribution and consumption. **The UK does not have enough land to feed its population and rear livestock**.…*
*…Collapse of production in two or more breadbasket regions would almost certainly significantly drive up global food prices, potentially **limiting the UK's ability to import food**, impacting household food security and restricting diets…Significant disruption to international markets as a result of ecosystem degradation or collapse will put UK food security at risk. Global scarcity would drive greater state intervention in supply chains, and securitisation of and conflict over food and water…Both*

*existing (plant pre-breeding, **regenerative agriculture**) and emerging technologies (AI, lab grown protein, insect protein) offer potential solutions."*

3. The Land Use Framework for England, published by Defra, March 2026.
Excerpts quoted from the report below are shown in italics.

Page 4: In her foreword the Secretary of State for environment, Food and Rural Affairs The Right Hon Emma Reynolds MP states that it "*sets out a coherent national vision for how we use our land"… and "…how we will safeguard our most productive land…"*

Page 7: Seven key land uses are identified: housing, energy infrastructure and clean power, food production, nature recovery, resilient landscapes, landscapes for water, and communities. One of the four guiding principles identified is "*Right use, right place",* meaning that any changes should *"play to the strengths of the land".*

Page 13: Under Energy Infrastructure and Clean Power, it states: "*Solar and wind will remain a small proportion of land use, and much of this land will be managed sustainably to boost and deliver other outcomes, such as grazing animals for food production or rewetting lowland peat soils beneath new solar farms."* As stated above, SGHS sees no convincing evidence that the Green Hill Solar development includes plans for sustainable management (soil is likely to deteriorate under panels), or significant food production.

Page 14: "*By 2050 agricultural land will be managed to prioritise sustainable food production and environmental benefits".*

According to the report this will include increasing woodland cover and wetlands, water management (to conserve water and reduce flooding), restoration of peatlands, wilder river habitats, and wildlife habitats within farming landscapes. **These measures will reduce the amount of land available for food production and underline the need to conserve BMV land for sustainable food production rather than solar panels.**

Page 21: in relation to projected land use changes from now to 2050, the three categories of nature restoration, renewable energy and urban expansion are not suggested for BMV land and "*this reflects the approach of the NPPF, which directs development away from BMV land".* Where some development is proposed on BMV land "*there may be the potential for multifunctionality such as through agrivoltaic systems (installing solar panels above crops)".* **There is a clear absence of this multifunctionality in the GHS Application which is predominantly on BMV land.**

Page 22: *"One of the opportunities supported through consultation responses was prioritising land use changes in areas that are less suitable for high-value sustainable agriculture. This allows other benefits such as environmental improvement, to be maximised while keeping more of the BMV agricultural land for producing food."*

Page 28: *"Adaptive by design: land use policy and delivery should be flexible enough to incorporate new evidence, respond to emerging needs and challenges, and evolve with changing local and national priorities."* **Surely this is a strong argument against a 60-year DCO.**

Page 35: *"Keeping landscapes productive for food. The Government is clear that food security is national security. We agree with consultation respondents who called for strategic safeguarding of the best farmland from permanent land use changes..."*

Page 45: *"Access and recreation. We want people to be able to access and enjoy green and blue spaces…"* Many aspects of the **GHS development would severely degrade both access and public enjoyment of the green spaces,** for example in Site F around Easton Maudit and Horn wood.

Conclusions

1. In its overall layout, the Green Hill Solar design contains fundamental flaws which are damagingly inefficient and would cause unacceptable environmental and social impacts.
2. It would take a large amount BMV land out of production for more than 60 years during which time the soil will lose fertility and the Applicant offers no guarantees that it will ever be fully restored to its former use or that the ground will not be exposed to the possibility of toxins leaching out of abandoned infrastructure.
3. The evolving national debate regarding agriculture, land use and food security, as evidenced by three recent UK Gov. reports, echoes our widely shared opposition to the use of prime agricultural land in this way. It should instead be developed through regenerative agricultural practices to continue producing local food for the UK population in a sustainable manner whilst enhancing soil health, biodiversity, carbon fixation and landscape value for nature and society.

Stop Green Hill Solar
22 March 2026