

Notes for objection presentation at Fosse Green Energy Open Hearing at the LNER Stadium, Lincoln, 11th March 2026

More of our countryside is being consumed by residential and commercial development, it is now additionally under attack from solar developers who have no immediate interest in, or responsibility to the communities who will be affected by this plan.

Land use

The 'UK Food Security – Outlook to 2050' report warns of 23% of current farmland loss by 2050 ((published by Science for Sustainable Agriculture and authored by Dr Derrick Wilkinson, a former chief economist at the CLA.)

Loss due to competing land-use demands including housing, solar infrastructure, tree planting and carbon offsetting.

Report warns, unless agricultural productivity is significantly boosted, these trends could lead to a 32% fall in current domestic food production, exposing the UK to increased import reliance and food price volatility. (Transport miles adding to carbon footprint)

Key findings include:

- 771,000ha of farmland lost since 2000; up to 3.96million hectares at risk by 2050
- Per capita food production down 5% over the past 25 years
- Yields slowing due to extreme weather, input restrictions, and policy-driven disincentives
- Food imports may need to rise by 160-260% under worst-case projections
- UK population forecast to reach 75-80 million by 2050, increasing pressure on domestic supply

(The Country Land and Business Association (CLA), Mike Sims, 05/09/2025)

Alternative technology/locations:

To protect the land resources we have for food production, and to protect and improve the level of biodiversity, alternative siting of solar panels is required.

UK appears to be focused on prime land use for this type of infrastructure, where other countries are looking at alternative sites for the solar projects.

Roofs are ideal sites doubling up on the footprint already used.

Commercial properties; supermarkets, manufacturing units, storage facilities, garage forecourt canopies, e.g. a new development in nearby Swinderby (EQT) currently has approx. 185.2K sq. ft of floor space and more development is planned on the site – the comparative amount of roof space would not be expected to be much less allowing for the construction process.

New build houses and residential developments should have sola infrastructure included as a matter of course.

The development of Canwick/Bracebridge Heath area will see 3.5K homes by 2026, Lincoln's Western Growth corridor development will see a further 3.2K homes constructed – assuming an average roof size of 75m², that equates to over 500,000m² of new roofs for siting solar infrastructure in the local area (using solar tiles not panels), again, doubling up the footprint of the land used.

Average UK home roof area:

- 55 m² for a small terrace
- 70 m² for a semi-detached
- 100 m² for a detached

UK average = 75m²

(GreatHomeBlog – roofreplacementcostcalculator.co.uk)

Other sites to be considered:

Innovative **Solar fence** panelling introduced in to the UK: Jaksun - 425watt capacity, 25 yr guarantee.

Solar rail panels: Switzerland, Sun-Ways prototyping a removable roll out panel system sited between rail tracks. Removable allowing for maintenance of track and panels. IThe organisation is involved in similar projects in Spain, Romania and South Korea. (Logistics UK, 07/01/2025)

Again, doubling up on the use of the footprint of the land.

Floating Voltaic Power (FPV) on the rise through the globe, Asis-Pacific market hit 3GW in 2022. Belgium, Brazil, Germany and Ghana reportedly investigating at the time.

Can be sited on artificial water bodies, such as reservoirs and open cast mines. RWE developing technology and options.

The UK could link in to existing hydro power infrastructure., using the feeder lakes for floating solar infrastructure, and the grid having immediate access to distribution grid connections.

Floating Solar vs. Ground-Mounted Solar

Benefits of FPV include: reduce alga growth to maintain water quality. (Solar Power Portal, Kit Million Ross, 11/09/2024)

Feature	Floating Solar Farms	Ground-Mounted Solar
Land Use	No land required	Requires large land area
Efficiency	Higher due to cooling	Lower during hot seasons
Installation Cost	Slightly higher	Generally lower
Maintenance	Lower dust, less cleaning	Higher due to dust/dirt
Environmental Impact	Needs assessment	Land disruption possible
Scalability	High in urban areas	High in rural areas

(therenewables.org/floating-solar-farms-clean-energy-future/)

Increased flood risk:

Surface water usually flows from the surface of the solar array to the areas in between the rows with an increased kinetic energy. This leads to an increased concentration of surface water and erosion in these areas and has the potential to create channelised flows, eroding the soil further and increasing the volumes and rates of surface water discharge. This can be further exacerbated by lack of maintenance and further erosion/compaction from vehicles such as maintenance vehicles.

- ([Solar Array Development | Essex Design Guide](#)), (Hydrologic Response of Solar Farms, Lauren M. Cook, S.M.ASCE¹; and Richard H. McCuen, M.ASCE², 2013)

Solar panel life expectancy:

25 yrs on average, but some up to 40. (Energy Sage (14/08/2025))

- Two million fewer people can be fed their five a day from vegetables homegrown in England as prime farmland lost to development
- Food security concerns increase, with 60% of England's finest agricultural land at the highest risk of flooding from climate change
- Nearly 300,000 homes have been built on prime farmland, with an extra 1,400 hectares used for renewable energy projects – despite more than enough previously developed brownfield land waiting for regeneration
- There was an exponential rise in Best and Most Versatile (BMV) agricultural land set aside for housing and industry between 2010 and 2022, from 60 hectares to more than 6,000 hectares per year. Almost 300,000 homes were built on more than 8,000 hectares of prime farmland. This is despite there being space for 1.3 million homes to be built on more than 26,000 hectares of previously developed brownfield land, much of it disused and derelict urban patches of the midlands and north most in need of regeneration.
- The increased risk of severe flooding caused by climate change will further challenge food security in future. More than 200,000 hectares – or 60% – of England's finest Grade 1 agricultural land is within areas at the highest risk of flooding, known as Flood Zone 3. Our most productive farmland is disproportionately close to river and coastal flood plains, with 75% of BMV in the East Midlands and 95% of BMV in the east of England at the highest risk of flooding.

(Campaign to Protect Rural England, July 2025)