Submission ID: 36562

Study of the potential damage the
Proposed Springwell Solar Farm
will have on the Fragile Soils on the Lincoln Heathland

Soil is a finite resource and is not an inert medium, but a living ecosystem that is essential to all life. It takes over 100,000 years to form 25 mm of topsoil and many more centuries after that before it becomes fertile. It has taken the landowner 90 years to get this irrigated heathland into the fine state it is in today. Soil degradation is a process usually caused by human activity.

I believe the installation of this large solar farm facility on the fragile soils of the Lincoln Heathlands will not just damage the soils during the construction phase, but by depriving. This soil from natural sunlight and nutrients for 40 years will irretrievably damage it to the degree it may take many many many years to remediate if ever.

These proposed actions disturb the soil structure and leave it vulnerable to water and wind erosion which in turn damages the complex systems below the surface.These practices cause the decline in soil health, biodiversity and obviously productivity leading to issues at all levels of many ecosystems, the consequences of which are local flooding and wind blow erosion. Soil compaction occurs when there is a combination of wet soil and heavy weight, an example is: the heavy unwieldy construction machinery which is used for pile driving and concreting, these works cause all the natural tunnels and pores created by earthworms and various organisms to get compressed below ground.

Soil degradation is the largest threat to our future food security which is associated with the loss of soil productivity. When the land is covered by structures such as solar panels, soil husbandry by various crop rotation practices are impossible to undertake

When arable land is farmed, it allows different plants to be grown in different areas and they in turn affect the soil differently, this practice allows the soil to replenish itself with the nutrients that are lacking within the soil. Soil damage will occur when land is left barren for long periods of time, only one type of plant will grow over and over again. When rainfall is not evenly distributed over the land, the rain runoff from structures such as solar panels will create channels for the rainfall to either accumulate in, or it will run to the low points, around these areas you may get some vegetation growth. Which will seed and regrow in following years.

Under the structures without sunlight to promote photosynthesis over the lifetime of this proposed project I believe it will become a barren area of desertification. Which will suffer from wind blow soil erosion. We have all seen soil dust storms blowing across the A15 trunk road.

During the 40 year life of a solar farm no nutrients will be applied nor any tillage will take place. These arable lands are presently sub-soiled by ripping to a depth of 450mm periodically to break the consolidated pan. After the piling and sub-structure works are complete this proposed site will have become a hardpan where no methods to break it up to introduce air and natural drainage can take place for 40 years. I believe this land will be unable to be remediated and that is not taking into consideration the considerable chemical contamination described by others, most certainly so on the fragile Lincoln Heathlands.

I believe the proposed development if approved as submitted is in contravention of the following:
NPPF paragraphs, 183 & 187 (a, e & f);
NPS EN1 paragraphs (5. 11. 12);
NPS EN3 (2. 12. 29 & 2.10. 145)

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1. The inspector needs to press the applicant on the real risk to tourism in the area
2. Real concerns about contamination of the soil and aquifer. Forever toxins and microplastics should not be ignored
3.A full independent health and well-being assessment should be demanded by the inspector. The impact on health is already being felt.