Greatford Parish Council Closing Summary Statement for Mallard Pass Solar Farm Planning Examination Deadline 10.

Over the preceding 2 years the residents of Greatford have repeatedly expressed their concerns about this proposed application both directly to the Applicant, and also to the Planning Inspectorate, via personal representations and representations from Greatford Parish Council. A summary of the concerns raised and how these have (or have not) been addressed is detailed below.

1. Flooding.

Of greatest concern to the residents of Greatford is the potential for this proposed development to increase the risk of flooding in the village from the increased volume of runoff of rainwater from the proposed large areas of solar panels.

At present the rain water received across the site falls onto arable land and is able to infiltrate the soils of the site and be stored there. When the soils are full (at field capacity) the water then moves into the drainage system which ultimately feeds into the West Glen river which flows through and around Greatford.

The covering of large areas the soil with solar panels (effectively a roof) will concentrate the rainfall onto a significantly smaller area of the soil, below the drip lines of the panels which will reduce the area of soil receiving the rainfall and thus the available reservoir within the soil to store water.

This water will not "spread evenly" underneath the panels as was suggested by the applicant, but will move under gravity down into the soil. When the soil is at field capacity the water will then flow overland as runoff, and more rapidly into the drainage system. This increased runoff will more quickly arrive in the West Glen and Greatford than is currently the case.

In a wet period when the reduced area of soil able to receive the rainfall is at field capacity, the increase in flows will create a surge in water volumes in the West Glen that has the potential to exceed the capacity of the Greatford Cut, the villages' primary flood defence. When this happens the river water backs up in the area of Greatford Hall, overtops the bank and then floods through the grounds of Greatford Hall and into Greatford Gardens, flooding the homes and gardens of residents.

2. Grassland Establishment.

One of the key measures proposed by the applicant to ameliorate the potential for overland flows of water and to improve water infiltration into the soil is to establish grassland. Greatford Parish Council have suggested that grassland establishment should take place 18 months prior to the commencement of construction to allow the hard wearing but slow growing species proposed by the applicant to become fully established. A fully established grass sward will be more resilient to the rigours associated with trafficking and construction and may help (if trafficked correctly) to enhance the soils resilience to damage.

The methodologies proposed by the applicant to establish grassland are fundamentally flawed as they do not allow time for establishment prior to construction, and in some cases propose establishment after construction.

The biological activity in grassland beneath a solar array is around 25% of that observed in open ground; grassland establishment in the drier, cooler and shaded conditions beneath a solar array will be significantly compromised and establishment will be at best slow and at worst a failure.

Poorly established grassland (or bare soil) will be unable to perform the functions required of it by the applicant, ie: improving water infiltration rates, preventing runoff and the soil erosion associated with runoff.

3. Soil Compaction

A key part of the applicants strategy to slow water movement from the proposed development is to infiltrate rainwater into the soil as discussed above. This approach is predicated upon the soil's ability to absorb water throughout the soil profile. It is highly likely that soils will be compacted by the passage of construction machinery during the construction process. Surface compaction can also be caused by grazing animals which is likely to occur during the operational phase. Similarly, compaction could occur during decommissioning through trafficking with machinery.

Compaction occurs when pressure is applied to the soils from above (by machinery or animals) and the spaces between soil particles that hold air and water are squashed. Compacted soils are unable to absorb as much water as uncompacted soils and thus the space available to store water in the soils is reduced.

Compaction can occur at different depths in a soil profile and can lead to layers within the soil profile that are impermeable, or slowly permeable to water, typically referred to as a slowly permeable layer (SPL). An SPL that occurs at a depth of 30cm in a soil where the total soil depth is 60cm will reduce the water holding capacity of the soil by half, this could lead to less water being held within the soil and more water running off creating issues of flooding as detailed above.

Soil compaction can be alleviated through cultivations, however the applicants strategy to do this is flawed as compaction-relieving cultivations, such as subsoiling, are only effective when the soil is very dry, as they rely upon the lifting and shattering of the soil by pulling a winged tine through the soil at a depth below the compacted layer; this is not possible when the soil is wet. Also it will not be possible to do this in areas where cables and posts are buried, therefore much of the compaction caused will remain for the 60 year duration of the proposed development.

An SPL that is left in place for 60 years will create a wetter soil above the SPL than is currently the baseline scenario, and a corresponding drier soil below the SPL. This has the potential to significantly alter the properties of the soil and affect the ALC grading of the soils in the future.

4a. Agricultural Land Classification (ALC).

At the time of writing It has been 2 years since this proposed development was made public, from day one a significant concern of the Parish Council and residents of Greatford is the use of productive arable land for a solar farm.

A significant proportion of the proposed development area is on land classified as best and most versatile (BMV), however as we near the end of the examination process it is still unclear as to exactly how much of the proposed development will use land classed as BMV.

The ALC initial survey undertaken by the applicant was conducted at a resolution of 1 sample per 4Ha, this is a quarter of the recommended resolution of 1 sample per 1 hectare and the results estimated that the site had 53% BMV land.

The applicant then commissioned an ALC survey on 117ha of land that the first (low resolution survey) showed to have a high proportion of BMV. The second survey was conducted at a resolution of 1 sample per 1 hectare (as recommended in Natural England guidance).

The results of this survey were extrapolated across the rest of the site indicating and a revised calculation of 41% BMV was concluded by the applicant.

The Mallard Pass Action Group also commissioned an ALC survey at a 1 sample per 1 hectare resolution and this survey also found a different percentage of BMV land to be present than was suggested by the applicants initial survey.

Two independent reviews of the ALC survey reports undertaken by the applicant have also shown irregularities in the methodology of the survey and subsequent calculation of the area of BMV land across the site.

These reports and reviews all indicate that the calculation of the percentage of BMV land across the proposed development site is incorrect. It is not possible to accurately assess the impact of the development upon BMV land if the area of BMV land is not properly quantified, and therefore it cannot be possible to make an informed decision upon this planning application.

The ALC assessment guidance published by Natural England is there to ensure that planning authorities can make informed decisions over agricultural land that is subject to planning applications. In this case the guidance has largely been ignored and the resulting survey results are flawed and subject to challenge, a correctly executed ALC survey would leave no room for challenge.

4b. The effect of the development upon future ALC.

Unless adequate controls are put into place the proposed development will have a detrimental impact upon the ALC grading of the soils within the site over the proposed 60 year life of the development.

The introduction of compaction as detailed above will result in slowly permeable layers within the soil profile that cannot easily be remedied during the life of the development. This will mean that areas of the site will be wetter than the baseline scenario and this will result in changes within the soil (specifically gleying) which will affect the future ALC classification of the soils.

In addition the introduction of hundreds of metal posts (in the form of solar array supports) per hectare into the soil will cause a degree of disturbance that will locally compact the soil. However the greatest impact will be at decommissioning as it is highly likely that these posts will have corroded to such an extent that they will have to be dug out, rather than pulled out. In this instance the degree of top soil & subsoil mixing will be significant (when multiplied across the number of posts per hectare) and this will have a significant impact upon future ALC.

The future ALC of the site will be hugely affected if the solar array support posts cannot be fully removed. The remains of metal posts in the soil will make cultivations and other agricultural operations impossible and thus change the ALC grade to 4 or 5 as all versatility will be lost and the land will only be suitable for grazing.

These posts will in some areas of the proposed site be at a depth where they encounter ground water, in these instances corrosion of the solar array support posts may be worse, and this may also have an impact upon the ground water.

5. Archaeology.

The introduction of hundreds of metal solar array support (posts) per hectare has the potential to damage any archaeology present in the vicinity of the post, however far greater disturbance would be wrought at decommissioning if the posts had to be dug out of the ground due to corrosion (as above).

6. Traffic.

Greatford has long suffered the effects of HGV traffic routing through the village as a shortcut to avoid longer journeys via the local A road network, even though most of the local HGV traffic is subject to section 106 routing agreements. This is of greatest concern at a narrow T-junction in the centre of the village where HGV traffic mounts the pavement to avoid oncoming traffic, or forces oncoming traffic to mount the pavement to avoid on coming HGVs. This has resulted in damage to road furniture and also puts local pedestrians at risk while walking in the vicinity of the T-junction.

The proposed routing strategy for hauliers leaving the site requires them to drive from Essendine to Bourne, and then to Peterborough. The most obvious shortcut is to take the Greatford road from Carlby and then from Greatford via Langtoft or King Street to Market Deeping and then Peterborough.

In the experience of Greatford residents, routing agreements secured via planning applications are largely ignored by hauliers.

In addition to the potential problem of hauliers using Greatford as a short cut there is also the issue of other motorists using the village to avoid a prolonged period of traffic disruption that will be caused by the proposed development routing its cables along the road through Essendine.

This proposed development will increase the traffic through Greatford and add to the existing traffic related issues (speeding, HGV's mounting the pavement etc..) that the village suffers at present.

7. Community benefit or Community Cost?

The proposed Mallard Pass solar farm offers no benefit whatsoever to the residents of Greatford or the wider local area, it offers only the prospect of more flooding, and the degradation of our local resources and environment.

The levels of stress and anxiety experienced by the local community over the past 2 years since the first Mallard Pass leaflets landed on our door mats should not be under estimated.

Parish councillors and local residents have spent countless hours attending meetings, researching many varied topics (about which we have now amassed significant expertise), writing letters, reports and representations concerned with this development and how it will affect their futures.

These local people and the Parish Council have had to support these activities from their own sparetime and funds, funds and resources that could have been deployed on community projects that would have benefitted the community, this process has cost our community.

While The Parish Council and local residents have sought to oppose this proposed development with scant resources, ranged against them is a well resourced and well funded organisation that cares not one jot for the communities that they propose host their development. To coin a phrase it was like turning up at a knife fight with a pea-shooter!

While the Parish Council and residents of Greatford appreciate the fairness and integrity in the way the Planning Inspectorate has conducted the examination it has to be noted that the past two years have taken a significant toll upon our residents, and particularly those who have been active in their opposition to it.

Philip Britton, Anthony Barker, Jason Halsey, Gemma Taylor, Natalie Pretsell.

Greatford Parish Council