



Submission by Mallard Pass Action Group (MPAG)

– unique ID ref. 20036230

## **Deadline 4:**

# **ISH1 Scope of the Proposed Development, Need, Alternatives.**

## **Written Summary of Oral Case**

MPAG representatives: Mrs Sue Holloway; Mr Tony Orvis; Mr Ian Halliday-Pegg.

### **3. Scope of the Proposed Development**

#### **a) Proposed output of the generating station and connection to Ryhall substation**

The Applicant has not been consistent with regard to Plant Load Factors including 11.4% in marketing documents, 10% in Climate Change document and Non Technical summary, 11% in answers ExAQ, 11.4% Appendices to the Applicant's Response to Interested Parties' Deadline 2 Submissions and 10.5% in the comments made during the hearing. DUKES gives the percentage as 10% for 2021.

Post Hearing Update: DUKES updated on 29th June 2023 gave a Plant Load Factor for 2022 of 10.6%.

The Applicant has overstated the output. The headline 350,000MWh reduces to 253,000MWh after including panel degradation losses inverter losses and maintenance losses and perhaps a more realistic load factor.

Thus the Proposed Development would supply an equivalent of 62,000 homes not 92,000 as claimed by the Applicant.

The Applicant has over-stated the Proposed Developments contribution to net-zero. The embodied carbon dioxide has been estimated using IPCC estimates of lifecycle emissions, median value. Given that the solar panels would be sourced from China, 70% of the life-cycle carbon dioxide would come from manufacturing the panels. It is expected that the emissions from the proposed Development would be between 75th to 95th percentile on the IPCC distribution. Therefore the embodied carbon would be greater than that given by the Applicant.

If the lower output of the Proposed Development is taken into account, rather than a higher output that has been used by the Applicant in the calculations, the CO2 savings drop significantly, by 38% to 1.25 million tonnes CO2 equivalent. That is before the adjustment which MPAG believes should be made to the data derived from the IPCC emission table.

The Application documentation makes a comparison with how much carbon the Proposed Development would save over time versus life cycle carbon. The numbers given by the Applicant show that grid is being decarbonised by other projects as well and that the Proposed Development would save 423,000 equivalent tonnes of CO2 and the life cycle carbon would be 672,000 equivalent tonnes of CO2. The Proposed Development would be carbon positive by 250,000 equivalent tonnes of CO2.

The data provided in the response by the Applicant, refers to Long Field as a comparator. The Applicant uses such data to support the view that the Applicants' figures are conservative. This is not the case as the GHG figures and the lifecycle carbon figures are those presented by the Long Field applicant, not figures that are established in science or independently verified.

Research indicates that at least 70% of the lifecycle carbon is derived from the manufacturing process. The figures for Long Field, give this as only just over 50%. Those figures should have been challenged during the Application. It demonstrates the Long Field data is not conservative and is not a valid comparator for the Proposed Application.

The claimed output and carbon savings claimed by the Applicant as far as Mallard Pass Solar Farm is concerned need to be verified by an independent professional person or organisation.

The Applicant claims that the Proposed Development will be efficient even without a battery system. However, without batteries, the output would be highly variable and entirely at the mercy of the weather. The contribution to the Grid at any one point in time could not be guaranteed.

It is accepted that the Ryhall sub-station cannot be upgraded in order to accommodate a battery system. As the Applicant states, that is not commercially viable. This makes the development sub-optimal.

In the Longfield and Sunnica Statements of Need the author, who was also wrote of the Statement of `Need for the Proposed Development, stated

*Longfield Statement of Need:*

*12.5.13 Table 12-1 demonstrates that the colocation of those assets enables additional operational capabilities to be accessed for system benefit, supporting the view of the Applicant that electricity storage is associated development as per the Guidance on associated development applications for major infrastructure projects. Colocation is especially beneficial for NGENO where connections are to the transmission, rather than to the distribution network,*

*The Sunnica Statement of Need:*

*11.1.2.3 The Scheme provides an efficient opportunity to integrate BESS with large-scale solar generation. BESS are an essential technology for high-RES electricity systems, such as that which the NETS is anticipated to become during the critical 2020s,.....BESS play essential roles in the provision of those services necessary to keep power flowing to all consumers, as well as integration measures which help balance supply and demand, thereby reducing the need for carbon-intensive back-up generation*

Post Hearing Update: The Cleve Hill Statement of Need

7.1 Para 3. Solar, when coupled with electricity storage, can offer many important ancillary services to the System Operator, supporting the integration of its renewable profile into the GB energy system.

7.2. Para 5 With an array of batteries installed as part of the same generation asset, this energy can be stored and dispatched to the grid whenever and however it will be needed most by consumers. The batteries will also be capable of providing important locational and system-wide system services, made more useful because they will be backed by a non-grid source of electricity).

All of the other Solar Farm NSIPs currently being developed include the provision for battery systems. Battery systems are very expensive and would not be installed unless they were seen as essential.

## **b) Period of operation of the Proposed Development**

As the Proposed Development is unlimited in time it is impossible to determine the impacts of it across the various different topic areas as is understanding the best and worst case scenarios.

For example, if the Proposed Development has a life in excess of thirty years, panels will have to be replaced and the carbon cost involved, which will be similar to that of the installing the original panels, has to be taken into account. The Applicant has not taken this into account.

There are factors to consider about the impact of soil health over time. Natural England has stated great uncertainty about the impact of solar farms over the long term. No one actually really knows the true impact on soil health.

There is also the consideration for biodiversity were the life of the Proposed Development to be shorter than perhaps expected because, for example, the Proposed Development was no longer commercially viable. The Environment Act, expected to be mandated in November of this year protects biodiversity net gain for a minimum of 30 years.

The applicant states that the Proposed Development would be permanent and that the technical assessments are made on that basis. However, a period of 40 years is used in calculations.

There is an additional consideration and concern for landowners whether the Applicant's commitment to meeting the energy need an net zero is matched by their commitment of the scheme to the landowners in their proposed lease arrangement. With no defined time limit to the scheme, the situation is very unclear for landowners. MPAG's understanding is that the Applicant was offering very little commitment to any timeline for landowners indicating the Applicant could pull out very early on or could keep going indefinitely.

#### **d) Applicant's approach to the 'Rochdale Envelope' including Project Parameters and Design Guidance**

In preparation for the L&V session during ISH2, MPAG wanted to draw attention to the anomaly between the substation position illustrated on photomontage E which is close to the railway line in field 19, and in the documentation where it says it is 12m from the road at the top of field 19. The location and associated mitigation is essential to understand fully the landscape & visual impact.

Also a concern was that the primary compound is expected to hold 150 parking spaces, but at peak times there could be a workforce of up to 400. Whilst the Applicant suggests minibuses will be used to transport some of the workforce to the site, there is no indication/plan of overflow parking at the secondary compounds and the associated impacts.

#### **e) Proposed photovoltaic arrays/panels (including number required, orientation and layout)**

Because it is not commercially viable for the Proposed Development to have a battery system, the applicant is attempting to ameliorate the problem by over planting solar panels. The applicant has not given any details how many solar panels will be over-planted for this purpose.

Post Hearing Update: Note 84 of EN-3, over-planted panels installed to cater for panel degradation must not be used from "day one."

The extent to which the panels are over planted is yet more evidence that the Ryhall substation is not totally fit for purpose having, of course, been constructed for an entirely different purpose, supplying the

mainline railway. It is not clear what percentage of panels would be over-planted to take account of degradation and what proportion would be added to maximise energy generation to offset no BESS.

All the dis-benefits associated with the development have to be analysed against the specific situation regarding the Ryhall substation and not the general benefits ascribed to sub-station connections. The Ryhall sub-station is sub-optimal.

The efficiency of solar panels will advance and over the years and will become more efficient, more effective, and indeed may be replaced by some other renewable energy source altogether. The applicant states that the Grid connection has to be made by 2028. The applicant has also stated that they intend to start work, all other things being equal in Summer 2026. Approval, if granted, would be given in 2024 leaving just two years to complete detailed plans and to order 530,000 panels. The window for technological change, as put forward by the Applicant is in reality very small.

The alternative, east west, panel configuration of all the solar panels, would provide a better balanced supply to the Grid because the delivery of the energy would be more even throughout the day, there would be less grid balancing required which is heavy in carbon cost, it would take less space, which could be a vital part of keeping the scheme tighter, less grass management because it would not grow so rapidly and the panels would not be as high as those currently proposed.

Post Hearing Update: Cleve Hill Solar Farm will have east/west orientated solar arrays.

#### **f) Proposed on-site substation**

A photo montage gives an illustrative appearance of the substation taken from the main A6121 is not in accordance with where the Applicant is stating the substation would be in field 19. It is far closer to the railway line and therefore subsequently also closer residents on the A6121 and Glen Crescent.

The exact, intended location of the sub-station needs to be clarified.

There are 150 parking places that were being provisioned for in the primary construction compound. Consideration should be given that the workforce could be as high as 400.

#### **g) Details of solar stations and other equipment**

The Applicant provided details on the maximum number of containers in the PEIR documents but has not done so in the Application. Such details should have been reviewed and included within the application.

#### **i) Proposed fencing, cameras etc**

MPAG is part of the Solar Campaign Alliance which represents over 90 action groups across the country. Information is shared amongst the different groups across many issues and security is featuring more and more on the radar. Solar crime is going up because the components of solar farms are valuable and very

accessible. It is easy to get through deer fencing, get in and out quickly before anyone responds. To secure an area of 2000 acres will be extremely difficult.

Some insurance companies are starting to specify security fencing. This would be completely undesirable from a visual perspective. However, the worst case scenario should be put into the landscape & visual assessment because can the Applicant be 100% confident that they won't need to upgrade their fencing specification closer to the construction date if insurance companies start to refuse to ensure these solar farms with deer fencing. MPAG are aware of a case in which this has been handled retrospectively after an application was approved and fencing had to be changed from deer fencing to security fencing.

It will be a huge undertaking to protect a site the size of 2000 acres, local police forces don't have the resource to respond, it is already an issue with other rural crime.

**j) Proposed construction phasing and construction hours**

MPAG are concerned there appears to be no outline phasing plan. Perhaps there could be an indicative phasing based on understanding the different soil types across the order limits and the likelihood of when construction activity could take place, appreciating the weather conditions at the time would need to be taken into account.

**4. Relevant planning policy and decisions**

**b) Implications of recent solar farm decisions**

Although mindful of emerging policy, the planning balance has to be judged against the specific benefits versus the level of harm and impacts, and the specifications of the two developments for Longfield and Mallard Pass are not the same. There are many differences between the Proposed Development and others, therefore when coming to weighing up the planning balance, the variables will be different.

Longfield has a lower percentage of BMV land and lower community impact than the Proposed Development than the proposed development, yet questions still need to be asked though why Mallard Pass needs 852 ha to deliver 350MW, yet

Longfield only needs 453 ha for a 500MW connection to the Grid.

Post Hearing Update:

Comparison of Solar Farms

	Mallard Pass	Cleve Hill	Little Crow	Longfield	Sunnica
Order Limit Area (Ha)	852	360	226	459	981
P.V. Area (Ha)	420	176	91	293	621
%PV of Order Limit	49	49	40	64	63
Life (Years)		40	35	40	40
% BMV	42	5	16	37	4

- Of the large ground mounted solar farms the Proposed Development would have the lowest percentage of P.V. area to Order Limit area
- All the other solar farms listed above have BESS have batteries.
- The Proposed Development is the only one in which the life is not specified
- MPSF has the highest BMV percentage

## **5. Need**

### **a) Applicant to set out their position in relation to need**

The Applicant indicated that utility solar was one of the cheapest forms of electricity. MPAG disagrees on the basis of IPCC data (Technology-specific Cost and Performance Parameters Appendix 111)

### **b) Consideration of benefits of the Proposed Development**

The Applicant claims that the Proposed Development would supply enough electricity for 92,000 homes. As explained earlier the claimed output of the Proposed Development is incorrect with the estimated number of homes supplied being 62,000.

The Applicant referred to material planning benefits and habitat creation. It is important to differentiate between habitat creation by virtue of mitigation or enhancement. Mitigation and enhancement cannot be double counted. The habitat creation appears to have predominantly been done to satisfy screening requirements, which when the community looks at the impact of that screening, has a massive negative impact and harm on the landscape.

Permissive paths have been put forward as an enhancement. MPAG's feedback on behalf of the residents has been that permissive paths lined by fencing and solar panels would add no value to members of the community, a view held strongly. There has been no consideration of the potential for placing permissive paths away from the solar panels.

If the Proposed Development is approved few, if any, local people will be employed. The demographic of the rural villages surrounding the proposed development does not comprise the kind of people that are likely to be employed on the Proposed Development.

MPAG dispute the Applicant's claim that consumer electricity prices will be lowered as a result of the Proposed Development. As was accepted by Mr Gillett, on behalf of the Applicant consumer electric prices are linked to the price of gas and are likely to be so for many years until or if electricity generation using gas is no longer required.

The community made 1200 relevant representations and 95% of those representations were opposed to the Proposed Development. The non-statutory consultation and written representations gave similar responses. Clearly the local community do not agree with the Applicant regarding the claimed enhancement and benefits.

## **6. Site Selection and Alternatives**

### **a) Approach to site selection and the extent of the Order limits**

With respect to sequential testing and site selection MPAG do not feel full consideration was taken for the flood risk off-site in flood zone 3. With a river running through the site and recognition of on-site flooding in certain areas, recognition should have been given to the likely surface water run-off on saturated ground (at time of field capacity) as a result of 530,000 panels being installed.

The LLFA for Rutland acknowledged some concerns and evidence provided by MPAG, Greatford parish Council and the Greatford flood warden also highlight the ongoing flood problems in Greatford, Banthorpe and around Essendine church.

### **b) Consideration of the preference in national policy to use lesser quality agricultural land**

The Applicant made no reference to DEFRA food security strategy, which actually makes some quite alarming claims. Included in our Written Representation (REP2-090) there is reference to a research project which was included in the written representations that were submitted by Mallard Pass and that was giving some really dire warnings on the lost potential loss of land.

The site is site all grade 2,3a and 3b land that is not lesser quality land in terms of production. As the Applicants submission demonstrated yield difference between grade 3a and 3b can be low.

There is increasing evidence that shows that some of that 3b land might be more resilient in some of the climate experiences that we have had in recent years that makes that land more resilient in really hot conditions compared to what you might expect when considering the calculations made by the Applicant.

This is not lesser quality land as evidence to show that it's been well farmed and is able to produce high quality and high yields.

Given that the Proposed Development will be permanent it must be the case that the loss of agricultural land is also permanent.

### **c) Alternative technologies**

MPAG challenged the Applicant's use of the Sizewell C judgement as a reason for not considering wind as an alternative to solar in that the Sizewell C judgement referred to wind or solar as an alternative for nuclear energy. Clearly as the judge said:

"The absurdity of the claimant's argument was well-demonstrated by Mr. Strachan KC and by Mr. Phillpot KC for the defendant and SZC respectively. The implication of ground 4 would be that a decision-maker dealing with a proposal for a solar farm or wind turbine array, obliged to comply with reg.64(1), would have to consider as alternative solutions nuclear power and, as the case may be, wind power or solar power options ...."