13th July 2018

Cleve Hill Solar Park Ltd
Woodington House
East Wellow
Hants
SO51 6DQ

This correspondence sent via email only

Dear Mr Brennan,

RE: Cleve Hill Solar Park Phase 2 Consultation

This letter constitutes Kent Wildlife Trust's formal response to the Phase 2 consultation on the Cleve Hill Solar Park (CHSP). We acknowledge and applaud the level of engagement the CHSP team has undertaken with the Trust prior to this stage through the Habitat Management Steering Group, and expect it to continue to enable the issues below to be discussed in more detail.

Summary

We are generally supportive of initiatives to reduce human reliance on fossil fuel energy generation, and renewable energy no doubt has a role to play in this. However, this should not be at the expense of the natural environment. **The proposals set out in this consultation will result in significant impacts on wildlife and are unacceptable.**

We are unconvinced the mitigation proposed, most notably in the form of a 41 hectare Habitat Management Area, will be sufficient to offset the impacts on a number of species, and this shortfall is confirmed for Dark-bellied Brent Geese within the documents. Marsh Harrier is also of particular concern, as a possible outcome of the proposals is the loss of this site and adjacent nature reserve as a breeding and foraging area. The proposals will adversely affect the integrity of the Special Protection Area (SPA).

Further detail on these and other issues is appended to this letter.

Yours sincerely,

Greg Hitchcock

Thames Gateway Officer
greg.hitchcock@kentwildlife.org.uk

Basic and Precautionary Principles

Throughout our consideration of the proposals we have had regard to the core principle of ensuring no net loss of biodiversity *as a minimum*. While we appreciate the need to attempt to quantify the scale of the impacts, a disregard of any impact, even if considered 'of low magnitude' would be an erosion of the principles of sustainable development.

We have also had regard to the principles of mitigation to offset the impacts not just in scale but in kind. An enhancement in the outcome for a one ecological receptor does not mitigate for a negative impact on another.

The proposals in front of us are of a scale and design not previous seen in the UK, still relatively novel internationally, and thus not fully understood with regard to their impacts upon flora and fauna. Owing to the sensitivity and importance of the nearby designated habitats, as well as the species therein and on the development site, it is necessary to adopt the precautionary principle. In the absence of evidence, and in the presence of uncertainty, it is prudent to consider the worst case scenario with regard to the impacts and efficacy of mitigation when presented with a range of possible outcomes.

Alternatives

While it can be argued there is a need for additional renewable energy generation, it does not necessarily follow that there is a need for a development of the scale, and at the location, proposed.

In Section 4 it is stated that "*A large number of sites had been identified by a team of project developers via direct approaches and a network of land agents across the country*" though these do not appear to be provided in the supporting appendices.

While we understand that the spare capacity at the Cleve Hill substation presents an opportunity, and is a principle driver in the selection of the development site (Section 4.2), this does not negate the need for full and proper consideration of alternatives. In the context of national renewable energy generation, we would expect a full and proper consideration of alternatives to include not just alternative locations, but alternative patterns of generation, i.e. multiple, smaller, decentralised generation.

While it may not be in your interests to undertake this work, we will be pushing the Planning Inspector(s) and Secretary of State to have regard to this. Indeed, we consider it essential to meeting the requirements of the Habitats Regulations to rule out alternatives to meeting the need.

Kent Wildlife Trust believes that the best use of the development site would be to accommodate managed realignment. This would benefit both the environment through habitat creation and local communities through the provision of recreation and ecotourism opportunities, and potentially reduction in local flood risk. It is the best location within The Swale SPA for such an undertaking, and this is reflected in proposals within the Environment Agency's Medway Estuary and Swale Strategy. The solar park proposals are incompatible with this.

Wintering Birds

Overwintering birds, particularly those associated with The Swale Special Protection Area (SPA), are a key issue with regard to the impacts of the proposals. It is essential that the proposals are able to demonstrate that there will not be an adverse impact on the SPA. The proposals in front of us have not done that.

The key principle proposed with regard to mitigating the loss of habitat is the provision of a smaller but 'higher quality' area of equivalent 'carrying capacity' to that being lost (expressed as 'bird days' in the documents). The calculations presented are insufficiently robust, and the predicted outcomes overly optimistic.

In seeking to shrink 387 hectares of 'extensive' habitat into 41 hectares of 'intensive' habitat differing requirements of species are likely to come into conflict. It is important that this is taken into account when considering the area required and its management.

Dark-bellied Brent Goose

It is clear from the survey results that the percentage of the SPA's Dark-bellied Brent Geese population that the development site supports varies from year to year. Anecdotally it has been suggested that this is a result of changes in crop and crop development, and this would be consistent with what we know of this species, though site crop information to compare to the results to verify this would be welcome. There are no doubt other factors involved that influence the day-today differences in survey results, though these may be less well understood.

However, what is of little doubt is that at times the site supports a significant proportion of the SPA's population, occasionally over 100%[1]. There remains a question over how we attempt to quantify this in order to put in place adequate mitigation to ensure the integrity of the SPA is not adversely affected. At present, the Preliminary Environmental Impact Report (PEIR) appears to use the Wetland Bird Survey (WeBS) 5-year Mean of the Peak counts for the Swale Estuary as a proxy for the SPA population to calculate the percentage provision provided by the Habitat Management Area (HMA). If we use an equivalent figure (or as close as possible) from the development site survey results (mean of the peak counts) to calculate the provision the development site provides we get 64%. The PEIR also uses a 'mean of seasonal monthly peak means' and 'mean of seasonal means' of the development site survey results to quantify the value of the development site. Using the former figure we get 32%. While the true figure arguably falls somewhere between the lower and higher of these three figures, the validity of the approach taken, and other possible approaches, is clearly a subject that needs further discussion. This is of course as valid for other species as it is for brent geese. To enable further comment on the issues, we have worked with the approach taken in the PEIR and the figures provided therein.

Key to the calculations of the required area of mitigation for Dark-bellied Brent Geese is the paper by Vikery *et al.* (1994) '*The management of grass pastures for brent geese*'. Presented are two potential carrying capacities based upon management prescriptions studied in this paper (1,562 and 2,097 bird-days/ha). However, we note that the study cited (and therefore the figures in question) was of grassland that had been established for several years prior to the study being undertaken – as the title suggests, it was of management of grass pastures, not arable reversion as is the case at Cleve Hill.

[1] Further discussions around the issue raised in this paragraph will necessarily include the accuracy of SPA population figures and movements of birds between SPAs in the area.

The higher bird-day figure stated depends upon the inputs of fertilizers. However, many times in Chapter 8 (Ecology) the cessation of the input of fertilizers is stated as an outcome of the change from arable, leading to improvements in the water quality and habitats of the ditches, and indirect benefits for designated sites. The application of fertilizer to achieve more bird-days would contradict the assessments made for other ecological receptors.

For the reasons set out above, we consider even the lower figure of 1,562 bird-days/ha for brent geese to be overly optimistic. The actual figure, taking into account both the less intensive management prescriptions consistent with ecological assessments in Chapter 8, and the fact the site is arable reversion that is likely to take a while to 'reach condition' under these prescriptions, the actual figure is likely to be lower than this.

However, even using these figures (or rather a mid-point between the two) by admission "*The HMA may not be able to replace entirely the loss of foraging provision for brent geese*…" (Chapter 9, Paragraph 158). Based on the assumptions made (notwithstanding we consider these unsafe), it is stated that the HMA would have the capacity to support 22.7% of the foraging requirement of the SPA population (Chapter 9, Paragraph 157).

While it is not stated, based upon the figures provided for development site bird-days and SPA bird-days, the development site has supported ~32% of the foraging requirements of the SPA's brent geese. Paragraph 158 of this Chapter seeks to argue that the consistency of the HMA will offset this shortfall, compared to the present situation where the arable habitat does not provide the same foraging resource every season. However, this has already been taken into account in using mean, rather than maximum, figures. I.E. the fact that the site does not always provide foraging for brent geese, as evidenced by the survey results, has been taken into account by the use of those survey results in the calculations of development site bird-days. The Ornithology Technical Appendix states that 66.3 hectares are required for Dark-bellied brent geese, based on these metrics (Table A9.24).

Comparing the stated HMA provision (22.7%) to the current provision (~32%) we are left with a reduction of approximately 10% of the foraging availability for the SPA (comparing peak-means for the site and the SPA). As stated earlier, we consider the calculations for the HMA to be overly optimistic, so this shortfall is likely to be higher, at least in the short term.

In addition, there will be impacts from disturbance during the construction phase. This is to be offset by the establishment of grassland across the site prior to construction works commencing, providing areas of forage away from the development site. The phasing of construction across the seasons will need to take this into account. Even with this reduction, it is predicted that brent geese will be displaced from the site for a season (with the loss of forage availability that this entails).

Considering the complete loss of forage ('on average') that the site provides for an entire season as a result of construction disturbance, followed by the shortfall in provision of what is likely to be >10% minimum in perpetuity, we are surprised that the assessment concludes that the impact on this feature of The Swale SPA is not significant. We **disagree** with this assessment.

Lapwing and Golden Plover

The calculation of bird-days for Lapwing and Golden Plover is based upon a related and relevant study that looked at the carrying capacity of mixed arable farmland. However, we consider that the assessment of what can be achieved is overly optimistic, and has not taken sufficient account of the constraints and context of the HMA.

Lapwing and Golden Plover feed on invertebrates in a range of open habitats. At present, it is fair to assume that they feed on invertebrates associated with the crops present at the time (phytophagous and saprophagous inverts and their predators). As stated in Paragraph 129 of the Ornithology technical Appendix, "…*abundance and availability of potential prey items present in different habitats is likely to be an important factor shaping the distribution of plovers*...". We do not contest that switching from an arable habitat to permanent pasture will increase the forage available to plovers per hectare, but (1) this may take some time (particularly with regard to soil fauna) and (2) is likely to be constrained, both with regard to rate of increase and maximum, by management for brent geese and grazing pressure from brent geese (which will be in competition with phytophagous insects plovers feed on). While we acknowledge that a more conservative metric has been applied for years 1-5 compared to after this period, without further evidence we consider this overly optimistic.

We remain unconvinced that the HMA will provide adequate mitigation for Lapwing and Golden Plover for the reasons stated above. We therefore **disagree** that the impacts are not significant.

Breeding Birds

Marsh Harrier

As stated in Paragraph 307 of the Ornithology chapter, the "…*core survey area and adjacent terrestrial habitats form an important foraging area for marsh harriers throughout the year*." We also note that "*Even with this mitigation however, the effect of construction activities might displace marsh harrier from nesting in the KWT South Swale reserve that borders the Development area*" (paragraph 313).

Regarding the statement "*In the longer term, the effect is reversible as they may be expected to nest again if they are not displaced by the presence of the operational Development.*" (paragraph 314), the *may* and *if* express the considerable uncertainty regarding the impact the solar farm may have on Marsh Harrier. This is reinforced by the statement within the assessment of habitat loss: "*...the effect on nesting birds is uncertain as there is no evidence either way in the literature regarding the effects of the presence of solar panels on the proximity of nesting marsh harriers.*"

It is clear from this that, while the outcomes are uncertain, a possible impact is the loss of this "important foraging area" and nesting areas, even with the proposed mitigation. The area in question is not inconsiderable, and is a significant part of The Swale SPA. We **disagree** that this impact is not significant. More needs to be done to avoiding these potential impacts with regard to the proximity of solar panels to nesting habitat and width of potential foraging corridors, which is of particular concern.

Skylark and Yellow wagtail

As species that nest within the arable (and other open) habitats, the Skylark and Yellow Wagtail populations of the development site will lose the majority of their nesting habitat.

The proposed mitigation for this is the HMA plus enhancements to the designated area to the east of this. However, given skylarks' preference for ungrazed grassland, set-aside and winter cereal (Browne *et al.*, 2010[2]) we are unconvinced that sufficient enhancement can be achieved to offset the

[2] S. Browne, J. Vickery & D. Chamberlain (2000) Densities and population estimates of breeding Skylarks *Alauda arvensis* in Britain in 1997, Bird Study, 47:1, 52-65, DOI: 10.1080/00063650009461160

impact on this species. While in theory the changes are more likely to benefit Yellow Wagtail than Skylark given slightly different habitat preferences, as mentioined earlier with regard to lapwing and Golden Plover, we are concerned that the requirements on the HMA to support so many species at a high density will result in compromises in management that may result in failure.

We note the uncertainties regarding the overall impact on these species: "*There is some uncertainty with regards to the breeding opportunities in the areas between the solar arrays, as these species prefer more open habitats than the grassland between the arrays might provide.*" (Chapter 9 Paragraph 327).

Impacts from Noise

Paragraph 105 of Chapter 9 states "*In line with the recommendations of the IECS study, the noise assessment for the Development suggests that a level of 70 dB LAeq (at the bird receptor location) is a suitable threshold for significant effects on ecological designations.*" In Paragraph 19 of Chapter 12 more detail is given, stating that the study in question suggested a classification of noise levels of 70-85 dB(A) as a 'moderate – high effect level', that resulted in *"Headturning, scanning behaviour, reduced feeding, movement to other areas close by.*" It is also reported that noise levels of 50 – 70 dB(A), a 'moderate effect level' resulted in "*…headturning, scanning, behaviour, reduced feeding, movement to other areas close by*" We note that the recommendations within this report were developed specifically for the Humber.

While the IECS study does state "*Ambient construction noise levels should be restricted to below 70dB*" nowhere can we find it this report that it concludes 70dB is a suitable threshold for significant effects on ecological designations. On the contrary, the IECS report states "…*regular construction noise between 50 and 70 dB (A) are categorised as moderate as these activities can have significant effects on avifauna*…" While useful as a starting point, the IECS study classified the significance of different disturbance events on birds and sought to classify the sensitivity of receptors within the area of study, it did not set universal thresholds.

It is clear from the above that noise levels below 70dB can induce a behavioural change, and therefore have the potential to cause an impact. The assessment of the impacts of noise should not be based solely on what may be considered a 'moderate – high level effect' (70dB) from a single noise event. What also needs to be taken into account is the frequency of disturbance and the significance of the birds involved (species and number). Habituation is also mentioned a few times. In the absence of alternative evidence it would seem wise to assume that the SPA birds are largely unhabituated to the potential noise events, and the proximity of sources, in question. While some may become habituated, the process itself requires exposure to disturbance.

We remain unconvinced that birds will not be disturbed by construction noise and would like to see further assessment and more information on this issue.

Ecology

Determining Importance of Local Wildlife Sites

Table 8.2 of section 8.4.5 includes "*Sites designated as…LWS's, or equivalents that may be designated according to criteria at the local authority level*" for sites of 'local' importance. Table

8.7 of Section 8.7 states for Abbey Fields Local Wildlife Site that "*The site is designated as a LWS according to criteria at the local authority level*." Despite the name, all Local Wildlife Sites in Kent are designated by the Kent Nature Partnership based upon criteria developed at a County level. There are no 'local authority level' criteria so all qualify as Regionally important.

Designation Boundary Issue

Paragraph 104 of Chapter 8 states "…*there is a network of ditches that flow from south to north into the South Bank of the Swale LNR and beyond that through a non-return valve into The Swale SSSI/SPA, MCZ and Ramsar designated sites.*" This implies an incorrect understanding of the boundaries of the designated sites. The SSSI/SPA/Ramsar boundary with the development site is the same as the LNR, I.E. it includes the sea wall and borrowdyke/reedbed on the landward side of the sea wall. This has implications for the assessment of impacts, as it states in Paragraph 107 that "*Direct disturbance to designated sites from dust arising from construction activities is not anticipated to be higher than the baseline, with sea defences and wall providing a physical barrier to impacts from this source on the Swale SSSI/SPA/MCZ and Ramsar.*" The assessments need to be revised where this error has been made.

Water Vole

The ditch network of the site would qualify as Local Wildlife Site under Criteria MA2 "…*any waterway or connected waterway complex where in total more than 2,000 linear metres of habitat is known to hold water voles during summer. Justification – these areas are core habitats in the county and provide local source populations.*" The wider area is also identified as a key area for Water Voles nationally[3]. As such, the Importance/Sensitivity of the feature should be considered at least Regional.

Culverts have the potential to fragment the ditch network, and therefore should be (1) minimised in number and size and (2) designed so as to reduce fragmentation as much as possible.
We remain to be convinced that all the planned new ditch crossing points are necessary. We would like to see justification for the need for multiple access points into each 'compartment' as well as justification that these need to be permanent (for the construction and operational life of the development) rather than temporary.

Bats

We note that "…the site offers foraging and commuting habitat used by at least nine species of bat'. That's 50% of UK species and easily qualifies it for Local Wildlife Site status (BA4 "*Regular feeding and foraging sites for an assemblage of 4 species or more*"). As such the Importance/Sensitivity of this feature should be considered Regional.

Reptiles

The Reptile Mitigation Strategy set out in Paragraph 211 of Chapter 8 does not represent best practice. Given that the survey followed a presence/absence (rather than a Relative Population Assessment) methodology trapping should proceed on a 'Minimum days plus number of searches with no captures' approach before trapping is completed. Additionally, it is not stated what the basis is for the belief that "…*sufficient carrying capacity is available for reptiles without the need to provide additional habitat improvements*." It is generally believed that populations expand to fill, and are then limited by, the carrying capacity of their habitats. Unless there is reason to believe the situation is different in this case, some degree of habitat enhancement will be required before reptiles are translocated.

[3] Strachan, R., Moorhouse, T. and Gelling, M. 3rd Edition (2011) Water vole Conservation Handbook. The Wildlife Conservation Research Unit, University of Oxford.

Inclusion of Grazing Marsh

We support the inclusion of the area of grazing marsh at to the east of the development site within the wider plans, in the interests of consistent and complementary management for wildlife, and to potentially provide enhancement measures that would be consistent with UK environmental policy. However, we reiterate our previous communication that as there exists a statutory requirement to maintain this designated site in favourable condition, it cannot meaningfully contribute to mitigation for the impacts of the solar park. We note that this is effectively stated in Paragraph 139 of Chapter 9, but in other Chapters this area is sometimes referred to separately from the HMA, and sometimes as part of the HMA. This causes ambiguity when discussing mitigation and the final submission documents should avoid this.

Permissive Accessways

Proposed permissive accessways create a number of new circular routes. These have the potential to increase or decrease disturbance to wildlife occurring at the SPA depending upon a number of factors, not least of which is potential users' reaction to the solar panels. They will also increase disturbance to the ditch network, compromising its capacity to support species like Water Vole and Marsh Harrier. We are also concerned by the potential for additional 'permissions' (E.G. cycling) along these permissive accessways that may increase disturbance on the SPA sections of the circular routes.

As the outcome with regard to disturbance at the SPA is uncertain, but the increased disturbance to the ditch network is likely, we are, at present, opposed to the proposed permissive accessways. We are open to further discussion regarding these and how access may be managed to reduce disturbance, however.

A Note

Owing to the number and size of the documents and limited resources we have not been able to scrutinise them all to the level we would have liked. We may have missed further issues we would have raised here, or missed sections that addressed some of our concerns. The issues raised here are necessarily 'headline' issues.

We are aware that the responses to this stage of public consultation will be used to further refine the plans prior to submission of the application, and we intend to maintain a dialog during this period to discuss the concerns raised in this response and any further issues identified, with an aim to get the best possible outcome for wildlife should the application be approved.

Greg Hitchcock
Kent Wildlife Trust
13th July 2018