



Cleve Hill Solar Park

DCO Application Reference EN010085

Deadline 5 Submission

Comments on responses to the ExA's FWQ

and

Comments on responses submitted for Deadline 4

from

Kent Wildlife Trust

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Marsh harrier

Owing to the lack of progress regarding impacts on this species, we have initially ‘re-capped’ the issue so that we can respond to the information provided at Deadline 4, and incorporate further evidence we have found, in context.

Displacement

The development site is important for marsh harrier, forming an important foraging area throughout the year, and supporting nesting sites. The Report to Inform Appropriate Assessment stated that without mitigation, a Likely Significant Effect on Marsh harriers resulting from the loss of functionally linked land cannot be discounted (APP-026, paragraph 81).

Owing to the significant change in the landscape, including reduction of foraging area to linear strips between arrays, we have contended that marsh harriers, given their habitat preferences and foraging behaviour, may not use the mitigation provided, either in whole or in part. The phrase ‘in whole or in part’ can be taken to refer to either individual birds or the Swale population as a whole, but in both cases the result is a reduction in the carrying capacity of the Swale SPA for this species. Until recently the Applicant has not acknowledged this potential outcome of the mitigation being constrained by the development design, though the widening of the space between the arrays in response to Regulation 20 consultation to provide more habitat was welcomed.

Within the Ornithology Chapter of the Environmental Statement (App-039, paragraph 360) and Report to Inform Appropriate Assessment (App-026, paragraph 209) the Applicant predicts that marsh harriers will continue to forage between the arrays. An example of a marsh harrier nesting within 100m of a haul road at Kemsley is also given, though as there are an estimated 80-100 breeding females in the County as a whole, we suspect this may be the ‘exception that proves the rule’. An observation of a marsh harrier foraging along the edge of a solar park on Sheppey is also reported, though it is acknowledged that it was a casual observation, not part of a quantitative study, and this would still appear to be a much more open landscape than that proposed.

In the most recent version of the Statement of Common Ground between the applicant and Natural England (REP4-039), the Applicant states “*There is no published evidence either way regarding the reaction of marsh harriers to solar arrays of this scale, or any other scale, in the landscape*” and “*...absence of evidence that marsh harriers would be displaced at landscape scale.*” We have undertaken another literature search (necessarily limited to that freely available online) with slightly broader search parameters (i.e. not specifying solar parks) and found a paper titled “Habitat Use and Selection of the Marsh Harrier *Circus aeruginosus* in an Agricultural-Wetland Mosaic” by Alves *et al.*¹

Alves *et al* identified the factors that influenced the occurrence and abundance of marsh harriers in an agricultural wetland landscape in Portugal. They identified that there was a negative association (with a strong statistical significance) between roads and ‘Human constructions’ (stated as “e.g. buildings, industry”) and the presence of marsh harriers during the breeding season. While solar arrays are not mentioned *per se*, given the industrial look and scale of the solar arrays proposed for Cleve Hill, we see no reason why marsh harriers would react to them any differently than to any other form of building or industry. Alves *et al* state “*Human disturbance variables, such as agricultural machinery, constructions,*

¹ Alves, M., Ferreira, J., Torres, I., Fonseca, C., and Matos, M. (2014). Habitat Use and Selection of the Marsh Harrier *Circus aeruginosus* in an Agricultural-Wetland Mosaic. *Ardeola*. 61. 351-366. 10.13157/arla.61.2.2014.351. Available at https://www.researchgate.net/publication/269706421_Habitat_Use_and_Selection_of_the_Marsh_Harrier_Circus_aeruginosus_in_an_Agricultural-Wetland_Mosaic

road occupancy and cattle, presented a general negative effect on marsh harriers.” This latter variable, cattle, also has potential implications for the LBMP, though it was only detected in the non-breeding period, so may not be an issue.

In the absence of anything better, this study appears to be the best available evidence regarding the impact of industrial development on marsh harriers, and casts doubt on whether the proposed mitigation will avoid a Likely Significant Effect. As stated in our answer to ExQ2.1.15 (REP4-068) and at ISH6 there are no remedial measures in the LBMP that would ‘remediate’ this impact.

Carrying capacity of the development site for small mammals

In their answer to ExQ2.1.5 the Applicant states “*Whilst it is acknowledged that individual birds may be dissuaded from utilising the site by the presence of the Development, the greater availability of prey and the more favourable habitat created is expected to at least maintain the carrying capacity of the Order area at a population level*” (REP4-022). We welcome this acknowledgement that marsh harriers may be displaced from the site by the development. This is slightly confused by the statement shortly after “*The Applicant is confident that the separations achieved are sufficiently wide that marsh harriers would not be deterred from entering the solar array area from the borrow dyke*” as the two statements could be considered contradictory. We assume that the birds being referred to in this latter case are those individuals that have not been dissuaded from utilising the site by the presence of the solar panels.

The shift from the potential positive effect on marsh harrier predicted in the Report to Inform Appropriate Assessment (APP-026, paragraph 363) to ‘at least maintain the carrying capacity of the Order area’ quoted above puts even more importance on the question of the effective carrying capacity of the development site.

In support of the answer to ExQ2.1.15 the Applicant has provided a comparison of the carrying capacity of pre- and post-development habitats for small mammals (REP4-022). This is necessarily quantitative and relative, given the lack of empirical evidence available, including a baseline for the development site. While we would agree that the carrying capacity of the site for small mammals is likely to be higher owing to the change from arable to ‘grazing marsh grassland’, we would state that this does not necessarily translate into a higher carrying capacity for marsh harrier. The key unknown with regard to this is the availability of these small mammals to foraging marsh harrier, specifically those living under the panels.

At present, mammals within the arable areas are available to the marsh harriers whenever the crops are not at a stage that provides a physical barrier, and marsh harriers have been shown to forage within different crops depending on the stage of growth (E.G. Cardador & Mañosa, 2011²). The small mammals living in the grassland under the solar array will not be directly available to the marsh harriers. In order for the small mammal carrying capacity to translate into a marsh harrier carrying capacity we would have to assume that the rates of recolonisation of the available habitat strips by small mammals from under the array could maintain the hunting pressure exerted by the marsh harriers.

Putting aside the displacement issue, maintaining the current carrying capacity of the site post-development will mean providing enough available prey to maintain current hunting pressure. Taking into account the displacement issue and the Applicant’s arguments made in REP4-022, it means

² Cardador, Laura & Mañosa, Santi. (2011). Foraging Habitat Use and Selection of Western Marsh-Harriers (*Circus aeruginosus*) in Intensive Agricultural Landscapes. *Journal of Raptor Research*. 168-173. 10.3356/JRR-10-64.1. https://www.researchgate.net/publication/232689384_Foraging_Habitat_Use_and_Selection_of_Western_Marsh-Harriers_Circus_aeruginosus_in_Intensive_Agricultural_Landscapes

individuals not displaced by the development foraging at a greater rate (or more individuals foraging) to make up for those that are. It seems unlikely that this can be quantified.

Habitat Management Steering Group

In our response to ExQ2.1.8 (REP4-068) we expressed concern regarding the ‘enforceability’ of the decisions of the HMSG and the existence of the HMSG itself. Given the ‘adaptive management’ approach taken in the Landscape and Biodiversity Management Plan, and the flexibility this requires, including regarding triggers and remedial actions – essentially meaning a lack of something specific that can be enforced if necessary – the framework within which the HMSG operates needs to be robust.

The Applicant has expressed a willingness to accept further input into the role of the HMSG and how it may be secured. During the Issue Specific Hearing 6 where this issue was discussed, including the potential role of Swale, as the LPA, in the process, it occurred to us (but too late to raise) that were the LPA to chair the meetings of the HMSG (were the DCO to be granted, and as part of any further consenting, either as part of the LBMP or a separate requirement) it would go some way to addressing these concerns, I.E. by the LPA overseeing the HMSG decision making process. This was suggested briefly to Natural England and the representative from the LPA and the response was favorable, though it requires more discussion.

Landscape and Biodiversity Management Plan

At ISH6 the LBMP was discussed both as its own issue and in relation to other issues. We noted that the Applicant is intending to update the LBMP for Deadline 6, which is welcome as it gives more time for the HMSG to give feedback on Revision C (REP4-007 & REP4-008).

Revision C did incorporate many of the changes suggested by Kent Wildlife Trust, though we necessarily concentrated on Appendices A and J. As discussed at ISH6, there are tweaks needed to the document. Some of these are more important, and relate to monitoring, triggers and remedial measures, and as mentioned above we would like to see the HMSG defined further (though if not in the LBMP, then as a separate requirement). Some are just corrections to errors that have crept in as the document has been revised, E.G. the discrepancy between the text and Section 16 (with regard to implementation of the AR HMA and construction). As they key changes necessary were discussed at ISH6 and the corrections required relate largely to clarity we do not intend to provide these here, rather we will send them direct to the Applicant as part of the HMSG so the required changes can be made to the LBMP for Deadline 6.