



# CLEVE HILL SOLAR PARK

## STATEMENT OF COMMON GROUND WITH NATURAL ENGLAND

November 2018  
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**CLEVE HILL**  
SOLAR PARK





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## **STATEMENT OF COMMON GROUND (SOCG) – Pre-submission**

**NOVEMBER 2018**

**BETWEEN:**

- 1) CLEVE HILL SOLAR PARK LTD; AND**
- 2) NATURAL ENGLAND**



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## **1 PART 1 – INTRODUCTION**

### **1.1 Summary and Overview**

1. This Statement of Common Ground (SOCG) has been prepared on behalf of Cleve Hill Solar Park Ltd (the Applicant) in relation to an application (the Application) to be made to the Secretary of State (SoS) for the Department for Business, Energy & Industrial Strategy (BEIS), under section 37 of the Planning Act 2008, seeking a Development Consent Order (DCO) for the Cleve Hill Solar Park (hereafter referred to as the Development).
2. This SOCG is being prepared as a means of clearly stating any areas of agreement and disagreement between the Applicant and Natural England at the pre-submission stage.
3. The SoCG is supported by a technical appendix:
  - Technical Appendix A: Meeting Notes.

### **1.2 The Development**

4. The Development will be located approximately 2 km to the northeast of Faversham, and 5 km west of Whitstable on the North Kent coast. The total area of the Development site is 492.3 hectares (ha).
5. The majority of the site is located within the administrative boundary of Swale Borough Council (SBC), within the Kent County Council (KCC) area. A small part of the site is located within the Canterbury City Council (CCC) area.
6. The Development is classified as a Nationally Significant Infrastructure Project (NSIP) because it comprises a generating station over 50 MW.
7. The main infrastructure will include:
  - Solar PV Arrays (with a maximum height above ground of 3.9 m) with an installed capacity of greater than 50 MW;
  - An energy storage generating station exceeding 50 MW;
  - The Development substation; and
  - The associated development including flood defences, site access, grid connection to National Grid Electricity Transmission infrastructure and Habitat Management Areas.
8. The project is described in further detail in Chapter 5: Development Description of the Environmental Statement (ES).
9. Due to the rapid pace of technological advancement in the solar photovoltaic (PV) and energy storage industry, it is necessary to provide flexibility to allow the most up to date technology possible to be utilised at the time of construction. For this reason, the proposal is described in the form of outline Design Principles and a candidate Development Design, which provides an indicative, but realistic and feasible design to provide a potential scope of project and parameters against which the impacts of the Development can be assessed. This is an established principle, known as the 'Rochdale Envelope'.
10. The Rochdale Envelope comprises clearly defined parameters which the design will not exceed in the form of Outline Design Principles (Document Reference: 7.1) and realistic worst case candidate design parameters which are presented in Chapter 5: Development Description (Document Reference: 6.1.5).

### **1.3 Statutory Designation**

11. The Development site boundary includes part of The Swale, a complex of estuarine habitats (mudflats, saltmarsh and grazing marsh) supporting internationally notable assemblages of invertebrates, higher plants, and birds.

#### 1.4 Natural England

12. Natural England is the statutory advisor to the Government on nature conservation in England and promotes the conservation of England's wildlife and natural features.
13. Natural England is the defined conservation body under Regulation 9 of The Conservation of Habitats and Species Regulations 2017 (as amended) ('the Habitats Regulations'). Natural England must also be consulted by the Secretary of State (SoS; as the competent authority for Nationally Significant Infrastructure Projects (NSIPs)) for the purposes of Habitats Regulations Appraisal (HRA). The SoS must have regard to any representations made by Natural England under Regulation 63(3) of the Habitats Regulations.

#### 1.5 Consultation

14. The Planning Inspectorate's (PINS) Advice Note Ten: Habitats Regulations Assessment relevant to nationally significant infrastructure projects, Version 8 (November 2017) strongly advises that the pre-application consultation process is used to obtain assurances from the statutory nature conservation body (in this case, Natural England) that all potential effects have been addressed appropriately and in sufficient detail. Due to the proximity of the Development to the Swale Estuary, which is designated as a European protected site (a SPA), it was recognised at an early stage in the evolution of the project that there was potential for effects of the Development on a European site. As a result, detailed baseline surveys were commissioned by the Applicant to inform an assessment of the potential effects and consultation was initiated with Natural England in October 2016 through the Discretionary Advice Service (DAS) and has been ongoing throughout the pre-application process.
15. The consultation carried out to date by the Applicant is set out in Chapter 3: Consultation of the ES and technical chapters. Natural England were provided with documentation for review and comment through provision of the Preliminary Environmental Information Report (PEIR) during Section 42 consultation. Additionally the Applicant set up the Habitat Management Steering Group alongside Natural England and other relevant stakeholders to act as a forum to discuss mitigation and enhancement opportunities. Tables 1 and 2 set out the meetings undertaken with Natural England and the HMSG.

**Table 1: Natural England Meetings**

| Attendees       | Date       | Key Topics Discussed   |
|-----------------|------------|--|
| Natural England | 14/12/2016 | <ul style="list-style-type: none"> <li>• Ornithology surveys undertaken to date</li> <li>• Ornithology mitigation measures</li> <li>• Non-avian ecology surveys undertaken to date</li> <li>• Landscape and visual considerations</li> <li>• Site walkover with attendees</li> </ul> |
|                 | 23/07/2018 | <ul style="list-style-type: none"> <li>• Discuss NE S42 response</li> <li>• Inclusion of SSSI in mitigation</li> <li>• Marsh Harrier impacts</li> </ul>  |
|                 | 03/09/2018 | <ul style="list-style-type: none"> <li>• Geese surveys</li> <li>• Aims of the HMA</li> <li>• Fertilizer useage</li> <li>• HMA capacity for geese, lapwing and golden plover</li> </ul>   |



**Table 2: HMSG Meetings**

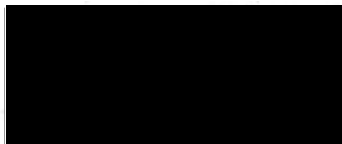
| Attendees | Date       | Key Topics Discussed   |
|-----------|------------|--|
| HMSG      | 21/02/2018 | <ul style="list-style-type: none"> <li>• HMA</li> <li>• Buffer areas</li> <li>• PRow</li> <li>• Management of vegetation</li> <li>• Ditches and water levels</li> <li>• Additional SSSI land</li> </ul>  |
|           | 18/04/2018 | <ul style="list-style-type: none"> <li>• Additional SSSI land and improvements in biodiversity management</li> <li>• Managing HMA</li> <li>• Managing the site for Marsh Harrier</li> <li>• Sheep grazing on site</li> <li>• Ditch and water level management</li> </ul> |
|           | 16/05/2018 | <ul style="list-style-type: none"> <li>• Water levels</li> <li>• Archaeology issues with water levels</li> <li>• Better management of SSSI</li> <li>• Birds using the site</li> </ul>  |
|           | 21/08/2018 | <ul style="list-style-type: none"> <li>• Site visit to fields F, H, J and the HMA</li> <li>• Increased buffers to drains were well received</li> <li>• Fence lines around panels</li> <li>• Marsh Harrier and their use of new habitat areas</li> </ul>                  |

16. Appendix A to this SoCG includes meeting notes from all meetings held with Natural England.
17. On consulting with Natural England, a number of adjustments have been made to the Development, principally, the extent and management of an Arable Reversion Habitat Management Area (AR HMA) to mitigate for the loss of functionally linked land adjacent to The Swale SPA and mitigation proposals for construction related impacts on the SPA.
18. Consultation with Natural England continues in order to discuss and resolve outstanding issues and develop resolutions as listed in this SOCG.
19. The Applicant and Natural England are aware of recent case law (People over Wind and Sweetman vs Coillte rulings 2018) in relation to the treatment of mitigation measures in the HRA process. Their positions as recorded in this SOCG reflect and take into account those rulings.

## 2 AGREEMENT

20. Confirmation that the tables in Part 2 of this SoCG reflect the points of agreement at the stated date is provided in Table 3.

**Table 3: Confirmation of Agreement**

| Date              | Signatory   | Signature   |
|-------------------|---|---|
| <b>08/11/2018</b> | Marian Ashdown, Casework Manager, Natural England Sussex and Kent Area Team |  |

### 3 PART 2 – AREAS OF FURTHER DISCUSSION

**Table 4: Scope and methodology of assessment**

| <b>Applicant Comments</b>   | <b>Natural England Comments</b>  | <b>Status (NE to complete)</b>         |
|---|--|--|
| <i>Applicant Question</i>   | <i>Natural England's response</i>  | <i>E.g., Agreed / Not Agreed / N/A</i> |
| Do Natural England agree that the 5 km and 10 km search parameters are appropriate for identifying European sites (of non-avian and avian interest respectively) with potential impact pathways and that beyond those distances, likely significant effects of the Development on European sites can be reasonably discounted? (Section 5.1 of the RIAA)  | The correct search distances have been used.   | Agreed                                 |
| Do Natural England agree that potential impact pathways only exist for The Swale SPA/Ramsar Site and that likely significant effects on other European sites within the search areas (Outer Thames Estuary SPA and Blean Complex SAC) can be reasonably discounted? (Section 5.1 of the RIAA)   | Agreed that there are no likely significant effects on the Outer Thames Estuary SPA and the Blean Complex SAC.   | Agreed                                 |
| Do Natural England agree with the scope of qualifying features associated with The Swale SPA/Ramsar Site screened into the RIAA, these being (Section 5.2.4 of the RIAA):<br>Wintering: <ul style="list-style-type: none"> <li>• dark-bellied brent goose;</li> <li>• European white-fronted goose;</li> <li>• shelduck;</li> <li>• shoveler;</li> <li>• wigeon;</li> <li>• pintail;</li> <li>• teal;</li> <li>• little egret;</li> <li>• oystercatcher;</li> <li>• avocet;</li> <li>• lapwing;</li> <li>• golden plover;</li> <li>• grey plover;</li> <li>• curlew;</li> <li>• bar-tailed godwit;</li> <li>• black-tailed godwit;</li> <li>• knot;</li> <li>• ruff;</li> <li>• sanderling;</li> <li>• dunlin;</li> <li>• green sandpiper; and</li> <li>• greenshank</li> </ul> | The Swale SPA is designated for its populations of wintering dark bellied brent goose and dunlin, the wintering waterbird assemblage and breeding bird assemblage. These are the features the Conservation Objectives refer to, and which should be assessed under the Habitats Regulations.<br>The wintering bird species listed are 'main component species' that make up the wintering waterbird assemblage.<br>Natural England's view is that the correct species making up the breeding and wintering | Agreed                                 |

| Applicant Comments  | Natural England Comments  | Status (NE to complete) |
|---|---|-------------------------|
| <p>Breeding:</p> <ul style="list-style-type: none"> <li>• shelduck;</li> <li>• mallard;</li> <li>• moorhen;</li> <li>• coot;</li> </ul> <p>and as other characteristic species:</p> <ul style="list-style-type: none"> <li>• breeding ducks;</li> <li>• breeding waders;</li> </ul> <p>Breeding and wintering:</p> <ul style="list-style-type: none"> <li>• short-eared owl.</li> </ul> <p>Notable invertebrates:</p> <ul style="list-style-type: none"> <li>• Bagous cylindrus (a weevil);</li> <li>• Erioptera bivittata (a crane fly);</li> <li>• <i>Lejops vittata</i> (sea club-rush hoverfly);</li> <li>• Poecilobothris [Poecilobothrus] ducalis (a dance fly);</li> <li>• Philonthus punctus (a rove beetle);</li> <li>• lapwing;</li> <li>• redshank;</li> <li>• reed warbler;</li> <li>• reed bunting;</li> <li>• yellow wagtail; and</li> <li>• marsh harrier.</li> <li>• Micronecta minutissima (a water boatman);</li> <li>• Malchius [Malachius] vulneratus (a malachite beetle);</li> <li>• Campsicnemus majus [magius] (fancy-legged fly);</li> <li>• Elachiptera rufifrons (a true fly); and</li> <li>• Myopites eximia (a true fly).</li> </ul> | <p>assemblages of the SPA are identified. Also, that the correct Ramsar invertebrates are identified.</p> |                         |
| <p>Do Natural England agree that the Conservation Objectives of The Swale SPA have been correctly identified? (Section 5.2.2 of the RIAA)</p>   |   | <p>Agreed</p>           |
| <p>Do Natural England agree that the coverage and methodology of baseline surveys completed are sufficient to enable a thorough assessment of potential effects on SPA/Ramsar birds? (Technical Appendices A9.1, A9.2, A9.3 and A9.4 to the ES (unchanged from the PEIR)).</p>  |   | <p>Agreed</p>           |

| <b>Applicant Comments</b>   | <b>Natural England Comments</b>  | <b>Status (NE to complete)</b> |
|---|--|--------------------------------|
| <p>Do Natural England agree with the conclusions on screening of likely significant effects in the absence of mitigation? These being (Section 5.2.6 of the RIAA):</p> <p>Screened in:</p> <p>Noise/visual disturbance during construction/decommissioning on breeding and wintering bird assemblages;</p> <p>Loss/change in habitats during operation on breeding marsh harrier and wintering dark-bellied brent goose, lapwing and golden plover;</p> <p>Hydrological changes during construction and decommissioning on breeding and wintering bird assemblages and the Ramsar invertebrate community; and</p> <p>Dust emission during construction and decommissioning on breeding and wintering bird assemblages and the Ramsar invertebrate community.</p> <p>Screened out:</p> <p>Noise/visual disturbance during operation;</p> <p>Habitat fragmentation;</p> <p>Operational collision;</p> <p>Recreational access changes; and</p> <p>Invertebrate attraction to solar panels.</p> |  | Agreed                         |
| <p>Do Natural England agree with the scope of the cumulative assessment in the RIAA (Section 6.2)?</p>  | <p>The search criteria set out in paragraph 230 of the RIAA is agreed. NE has not yet considered the full list of proposals considered in the cumulative assessment. This will be done when the ES is available.</p> |                                |
| <p>Do Natural England agree with the conclusion regarding transboundary considerations that the Development is not likely to have a significant effect on European Sites in another Member State? (Section 7 of the RIAA)</p>   |  | Agreed                         |

| <b>Applicant Comments</b>  | <b>Natural England Comments</b>  | <b>Status (NE to complete)</b> |
|--|--|--------------------------------|
| Do Natural England agree with the conclusion in the RIAA that the Development is not predicted to result in an adverse effect on the integrity of The Swale SPA/Ramsar Site? (Section 8 of the RIAA) | NE cannot comment on the conclusion of the RIAA until we have been able to review the full information to be presented in the ES to be submitted with the DCO application. |                                |

**Table 5: Section 42 Consultation: Loss of functionally linked land**

| <b>Natural England Comments</b>   | <b>Applicant Comments</b>  | <b>Status (NE to complete)</b>         |
|---|--|--|
| <i>Section 42 Response Comments</i>   | <i>Applicant's response</i>  | <i>E.g., Agreed / Not Agreed / N/A</i> |
| Where SPA/Ramsar birds regularly forage on land outside the designated site, this land may be considered functionally linked to the SPA/Ramsar by providing supporting habitat. Its loss should, therefore, be considered in any in combination assessment of impacts under the Habitats Regulations. The bird surveys carried out in support of the application indicate that the development site is used by significant numbers of wintering dark-bellied brent geese (hereafter brent geese), golden plover, lapwing and breeding marsh harrier. These species are either individually named on the SPA/Ramsar citation, or are a part of the assemblage feature. | No comment required.   | Agreed                                 |
| Furthermore, JNCC's 3rd SPA Review recommends that the boundaries of existing SPAs classified for dark-bellied brent geese, including The Swale, should be reviewed in order to ensure that important areas for feeding or  | It is agreed that a SPA boundary review has not taken place for the Swale and there is no evidence of a timetable for it taking place. | Agreed                                 |

| <b>Natural England Comments</b>  | <b>Applicant Comments</b>   | <b>Status (NE to complete)</b>               |
|--|---|--|
| other functional needs are included. The JNCC Review also recommends that the boundary of The Swale SPA (and other sites) is reviewed to ensure important functional areas for golden plover and lapwing are included, though it is noted that these species are not individually classified features of The Swale, but are part of the assemblage. The legal document against which the proposal should be assessed is the SPA/Ramsar citation, however the JNCC Review gives useful context to the importance of supporting habitat. | It is agreed that the HRA and ES Chapter 9: Ornithology will refer to the JNCC review where appropriate. It is agreed that the information provides useful context regarding the importance of supporting habitat for dark-bellied brent geese, lapwing and golden plover. It is agreed that the SPA/Ramsar citation is the legal document against which the Development is assessed. | To be agreed once ES Chapter 9 is available. |
| It is Natural England's advice that, without mitigation, the loss of functionally linked land would have a likely significant effect, under the Habitats Regulations, on SPA/Ramsar bird species. Therefore, an Appropriate Assessment will be needed to determine whether the mitigation proposed is sufficient to avoid an adverse effect on the integrity of the SPA/Ramsar.  | It is agreed that, without mitigation, there is a likely significant effect as a result of loss of functionally linked land and an Appropriate Assessment is required.  | Agreed                                       |
|  | Information to inform an Appropriate Assessment will be provided in the Habitats Regulations Assessment Report submitted with the Application.  |  |

**Table 6: Section 42 Consultation: Dark-bellied Brent geese functional land**

| <b>Natural England Comments</b>   | <b>Applicant Comments</b>   | <b>Status (NE to complete)</b>         |
|---|---|--|
| <i>Section 42 Response Comments</i>   | <i>Applicant's response</i>   | <i>E.g., Agreed / Not Agreed / N/A</i> |
| When the development site is planted with a suitable crop (winter cereals) it is clearly an important foraging resource for brent geese. For example, the peak count recorded on the development site was 3000 brent geese in January 2014 (compared to the peak Wetland Bird Survey (WeBS) core count of 2288 for the whole of the Swale Estuary in 2013/143). The development site is adjacent to eelgrass beds, so is in an excellent location for brent geese in that they can feed on the eelgrass at low tide, and then | In the PEIR, comparison between the site count as measured by the seasonal peak-mean metric and the peak WeBS count for that corresponding season was provided as an aid to understand the relative value of the Development site to birds; however, the values were presented in error for the South |  |

| <b>Natural England Comments</b>   | <b>Applicant Comments</b>  | <b>Status (NE to complete)</b>                                       |
|---|--|--|
| <p>on winter cereals at high tide, without having to fly far and expend energy.</p> <p>Chapter 9, paragraph 142, describes how the use of the development site by brent geese varies with the cropping pattern and growth of the crop. Fewer geese were recorded in 15/16 as the crop grew quickly and became unsuitable and in 17/18 the development site was either left fallow or planted with winter beans and so did not provide any food for geese. Paragraph 142 goes on to compare the peak mean count of geese using arable land within the development site to the peak mean WeBS count for the Swale. Whilst these figures show that the development site is very important for geese in two out of the four seasons, it is not clear where the figures come from.</p> | <p>Swale NNR rather than the Swale Estuary as a whole. These will be revised in the ES.</p>  |  |
| <p>In principle, Natural England's view is that the loss of functionally linked arable land can be mitigated by providing an alternative area of permanent grassland.</p>   | <p>It is agreed that loss of functionally linked arable land can be mitigated by providing an alternative grassland area for the duration of the Development.</p>  | <p>Agreed in principle.</p>  |
| <p>Natural England's view is that the amount of mitigation land should be determined by an assessment of the impacts. The goose-days metric provides an appropriate way of assessing losses against necessary mitigation. However, several different calculations of the number of goose-days are presented, based on peak or mean counts of birds. In order to determine which calculation is most appropriate, it is necessary to have information on the cropping regime for the development site.</p>   | <p>It is agreed that cropping information will be included in the ES to demonstrate the representativeness of the baseline data.</p>   | <p>To be agreed when ES is available.</p>                            |
|   | <p>It is agreed that the peak-mean metric (specifically the inter seasonal mean of the intra-seasonal mean of peak monthly counts) has been selected for use in the assessment and is a suitably precautionary metric.</p> | <p>Agreed that the peak mean metric, as defined, is appropriate.</p> |
| <p>Paragraphs 153 to 154 of Chapter 9 set out the goose-days metric for the lost arable and the new permanent grassland. These paragraphs show that, as the whole of the grassland area might not be used by geese, it only provides around half of the goose-days necessary to replace that lost. Paragraph 157 goes on to say that as the SSSI adjacent to the new permanent grassland will be enhanced, this will provide foraging habitat, which increases the number of goose-days the whole area will support.</p>  | <p>It is agreed that a peak-mean metric will be used for the assessment.</p>   | <p>Agreed</p>  |
|   | <p>It is agreed that the SSSI adjacent will not be used in any calculations of mitigation.</p>   | <p>Agreed</p>  |

| <b>Natural England Comments</b>   | <b>Applicant Comments</b>  | <b>Status (NE to complete)</b>  |
|---|--|---|
| <p>Whilst Natural England supports the intention to enhance the adjacent SSSI, this area cannot be included in any calculations of mitigation. This is because the site is already designated, is in favourable condition, and already provides a foraging resource for geese (and other birds). Therefore, the calculations in Chapter 9 point to the mitigation grassland not being large enough, and on this basis, Natural England's view at this stage is that it is not possible to conclude that an adverse effect on the integrity of the SPA/Ramsar will be avoided. However, we note the calculations of goose-days in the ornithological technical appendix, particularly Table A9.24, which indicate that the amount of mitigation grassland required depends on the management regime and the way the goose-days metric has been calculated. Therefore, we will continue to work with the applicant, and other stakeholders, through the Habitat Management Steering Group (HMSG) to advise on the mitigation necessary.</p> | <p>It is agreed that the mitigation grassland presented in the PEIR (41 ha in total, 33.5 ha of functional land) was not sufficient and therefore the size of the mitigation grassland has been increased to 56 ha in total (50.1 ha of functional land). Using the calculations set out in the RIAA (DCO Document Reference 5.2) this is considered to be large enough to conclude that an adverse effect on the integrity of the SPA/Ramsar will be avoided.</p>   | <p>NE welcomes the additional work that has been done regarding the mitigation grassland. We agree that, in principle, the area is sufficient, based on the calculations presented in the RIAA. However, this is subject to a full and detailed consideration of the ES, RIAA and other supporting documentation, and is dependent on management of the grassland to maximise its productivity for brent geese.</p> |
|   | <p>The management of the mitigation grassland has been agreed to be focussed on provision of optimal foraging conditions for brent goose. This will involve summer grazing by cattle and/or sheep, application of organic fertiliser (e.g. farmyard manure) equivalent of up to 50 kg N per hectare and late summer/autumn cutting if required to provide a nutritious, short-sward grassland capable of supporting 2,097 goose-days per hectare through the winter. The establishment and effectiveness of the HMA will be monitored. It is agreed to continue ongoing consultation with the HMSG through the construction and operational phases of Development.</p> | <p>NE agrees that the management of the mitigation grassland should be focussed on providing optimal conditions for brent geese. NE will provide detailed comments on the management measures once we have been able to review the full set of information to be provided in the ES.</p>  |



**Table 7: Section 42 Consultation: Golden plover and lapwing functional land**

| <b>Natural England Comments</b>   | <b>Applicant Comments</b>   | <b>Status (NE to complete)</b>  |
|---|---|---|
| <i>Section 42 Response Comments</i>   | <i>Applicant's response</i>   | <i>E.g., Agreed / Not Agreed / N/A</i>  |
| The arable land within the development site is also used by golden plover and lapwing, though conversely to the brent geese, these species were more numerous in the winters of 2015/16 and 17/18. The same area of permanent grassland is proposed to mitigate for losses of wader functional habitat. In principle this is acceptable, though Natural England would welcome further discussion, though the HMSG, as to whether the optimal management required for brent geese will also provide conditions suitable for foraging waders. | It is agreed that the management of the mitigation grassland as set out above in Table 3 will be focussed on providing optimal foraging conditions for brent geese. The HMA will also provide conditions suitable for foraging lapwing and golden plover; however, since PEIR, the estimated capacity of the HMA to support these two species has been revised from 3x mixed arable capacity, to the equivalent of mixed arable capacity, as cited by Gillings et al. (2007) <sup>1</sup> : 1,000 lapwing-days/ha and 1,560 golden plover days/ha through the winter. | Agreed that the figures cited by Gillings et al (2007) should be used for lapwing and golden plover.<br>NE will provide detailed comments on the suitability of the mitigation land to support lapwing and golden plover once we have reviewed the information to be presented in the ES. |

**Table 8: Section 42 Consultation: Marsh Harrier functional land**

| <b>Natural England Comments</b>  | <b>Applicant Comments</b>   | <b>Status (NE to complete)</b>  |
|--|---|---|
| <i>Section 42 Response Comments</i>  | <i>Applicant's response</i>   | <i>E.g., Agreed / Not Agreed / N/A</i>  |
| The flight activity surveys carried out, and illustrated in figure A9.34 of the ornithology technical appendix, demonstrate that the development site, and particularly the ditch habitat, is used by foraging marsh harrier. Improvements to the ditches and their margins are proposed to benefit foraging marsh harriers (Chapter 9, paragraph 315). However, it is uncertain as to whether marsh harrier will continue to forage along the entire length of the ditches given the presence of the solar panels | It is agreed that the increased 15 m minimum buffer (from 5 m in the PEIR) from bank top for solar panels and related infrastructure applied to the north – south ditches which adjoin the SPA will be sufficient to give confidence that marsh | NE will provide detailed comments on potential impacts on foraging marsh harrier once we have been able to review the full information to be presented in the ES. |

<sup>1</sup> Gillings, S., Fuller, R.J. and Sutherland, W. (2007). Winter field use and habitat selection by Eurasian Golden Plovers *Pluvialis apricaria* and Northern Lapwings *Vanellus vanellus* on arable farmland. *Ibis* **149**: 509-520.

| <b>Natural England Comments</b>   | <b>Applicant Comments</b>   | <b>Status (NE to complete)</b>  |
|---|---|---|
| creating a corridor effect. Whilst parts of these corridors are wide, there are pinch points where the solar panels are closer, and it is uncertain whether these will have a barrier effect.   | harrier will continue to forage along the ditches during operation.   |   |
| Paragraphs 317-318 of Chapter 9 state that marsh harriers breed within the adjacent KWT reserve, and that it is uncertain whether these birds will be displaced as a result of the presence of the solar panels within 10m of parts of the reserve.   | It is agreed that the doubling of this distance to at least 20 m gives confidence that it is unlikely that birds will be displaced as a result of the presence of the solar panels. | NE will provide detailed comments on potential impacts on breeding marsh harrier once we have been able to review the full information to be presented in the ES. |
| Natural England's view is that there is likely to be a significant effect on breeding and foraging marsh harriers and an Appropriate Assessment will be necessary. At this stage, our view is that it is uncertain whether an adverse effect on integrity of the SPA/Ramsar can be avoided. However, we will continue the helpful discussions we have had on this point through the HMSG. | It is agreed that the application of the buffers described above gives confidence that an adverse effect on the integrity of the SPA can be avoided in respect of marsh harriers.   |   |

**Table 9: Section 42 Consultation: Noise and Visual Disturbance**

| <b>Natural England Comments</b>   | <b>Applicant Comments</b>   | <b>Status (NE to complete)</b>   |
|---|---|--|
| <i>Section 42 Response Comments</i>   | <i>Applicant's response</i>   | <i>E.g., Agreed / Not Agreed / N/A</i>   |
| The birds for which The Swale SPA, Ramsar and SSSI are designated are susceptible to disturbance from noise, which may impact their energy budgets by causing them to cease feeding, or fly away from the source of disturbance. Loud, intermittent noise, for example produced by percussive piling, is particularly disturbing to birds. Evidence gathered by the Institute of Estuarine and Coastal Studies (IECS) suggests that birds begin to react (heads-up, alarm calls) to a noise level of above 50dB and that moderate to high disturbance (birds moving away) occurs above 70 dBA (Cutts et al. 2009). Although potentially a useful rule of thumb, the authors recognise that this is a relatively simplistic approach as it does not take into account the type of disturbance nor the sensitivity and prior experience of the birds. Furthermore, as the derivation of this threshold seems to be largely related to studies of noise disturbance associated with construction works | It is agreed that using 70 dBA as a generic threshold is simplistic and may not be applicable to the Swale.                     |  |
|   | It is agreed that a change of no more than +3 dB above ambient is unlikely to be significant, as it is barely perceptible.      |  |
|   | It is not agreed that +3 dB above ambient is a suitable threshold for the assessment of significant effects.                    |  |
|   | An additional literature review has been completed and will be presented in the ES and HRA Report. On the basis of the evidence | NE will comment in detail on the suitability of the noise mitigation measures once |

| <b>Natural England Comments</b>   | <b>Applicant Comments</b>  | <b>Status (NE to complete)</b>  |
|---|--|---|
| <p>on the Humber Estuary, it is probably most relevant to locations which already experience relatively high levels of background noise. Evidence collected from monitoring work associated with construction disturbance undertaken on the Humber Estuary has either been carried out outside the sensitive season, when there are low numbers of birds present; or when the competent authority has already determined that the proposed works will not adversely affect the integrity of the designated site. Given these limitations it is not recommended that the 70dB threshold is used as a generic threshold for noise levels which result in moderate to high disturbance of birds. Natural England advises that a potentially more suitable approach is to assess the change in noise levels, both continuous noise and sporadic noise. A difference of 3 dBA in similar types of noise is just distinguishable to people, so it is reasonable to assume that if the change in noise is no more than 3dB it is unlikely to be significant.</p> | <p>found in the literature, an assessment is made with respect to the likely reactions of birds to different thresholds of maximum sound levels from piling and equivalent sound levels from other plant and works during construction, as set out in the RIAA (DCO Document Reference 5.2). For intertidal areas in winter, the area potentially affected by noise above 50 dBA (whereby birds may react but not fly away) has been calculated and used to inform the assessment; there is a commitment to ensure no areas of the intertidal SPA will receive noise levels above 70 dBA (the level below which birds would not fly away) through mitigation measures set out in a SPA Construction Noise Management Plan (SPA CNMP). For parts of the SPA that are important for breeding assemblage species, as well as Schedule 1 listed species (WCA), there is a commitment to ensure that such areas of the SPA will not receive noise levels above 65 dBA (below which some alertness may occur but material behavioural change would not) through mitigation measures set out in the outline SPA CNMP.</p> <p>In summary the measures are:</p> <ul style="list-style-type: none"> <li>• 70 dBA noise limit for intertidal areas;</li> <li>• 65 dBA noise limit for breeding habitat in the KWT South Swale Nature Reserve.</li> <li>• Implemented through a Construction Noise Management Plan to include measures such as seasonal construction works exclusion zones,</li> </ul> | <p>we have been able to review the full set of information to be presented in the ES.</p> |

| Natural England Comments  | Applicant Comments  | Status (NE to complete)  |
|---|---|--|
|   | restricted piler operation (single pile hammer at any one time) and acoustic screening.   |  |
| <p>Chapter 9, paragraph 105, states that birds using the intertidal habitat adjacent to the development site will not experience noise above 70 dB LAeq and therefore are unlikely to be disturbed. As noted above, Natural England does not recommend using this threshold, but advocates an assessment of the change in the noise levels, both continuous noise (dB LAeq) and sporadic noise (dB LAmax).</p>  | <p>It is agreed that change in ambient noise levels is important in the assessment of disturbance. The change in noise levels has been incorporated into the revised assessment since PEIR, with consideration of continuous noise (dB LAeq) and sporadic noise (dB LAmax), as set out in the RIAA (DCO Document Reference 5.2). These have informed the noise mitigation thresholds set out in the Construction Noise Management Plan for the intertidal and breeding habitat within the SPA, as described above.</p>  | <p>NE will comment in detail on the noise assessment once we have been able to review the full set of information to be presented in the ES.</p>                             |
| <p>Natural England notes that Chapter 9, paragraph 110, states parts of the designated site on the landward side of the seawall support species that are important parts of the breeding bird assemblage of the SPA, including marsh harrier. Furthermore, little terns have attempted to breed at Castle Coote, within the Kent Wildlife Trust reserve. Therefore, impacts on breeding and wintering birds may occur during construction (and demolition) and should be assessed and mitigation measures included if necessary. We note that noise mitigation measures will be included in the Construction Environment Management Plan (CEMP), along with a Breeding Bird Protection Plan, though these are not yet included in the draft CEMP at Appendix A10.2. We also note that Chapter 12, paragraph 114, recommends the use of acoustic screening to reduce construction disturbance to ecological receptors.</p> | <p>It is agreed that impacts on breeding and wintering birds may occur during construction/decommissioning, with mitigation measures necessary to avoid or reduce the magnitude of effects. Details of the mitigation measures will be fully set out in a Construction Noise Management Plan and Breeding Bird Protection Plan appended to the CEMP, as described above. In summary the measures are:</p> <ul style="list-style-type: none"> <li>• 70 dBA noise limit for intertidal areas;</li> <li>• 65 dBA noise limit for breeding habitat in the KWT South Swale Nature Reserve.</li> <li>• Implemented through a Construction Noise Management Plan to include measures such as seasonal construction works exclusion zones,</li> </ul> | <p>NE will comment in detail on the suitability of the noise mitigation measures once we have been able to review the full set of information to be presented in the ES.</p> |

| Natural England Comments | Applicant Comments  | Status (NE to complete) |
|--------------------------|---|-------------------------|
|                          | restricted piler operation (single pile hammer at any one time) and acoustic screening. |                         |

**Table 10: Section 42 Consultation: Dust, surface water quality and lighting**

| Natural England comments  | Applicant comments   | Status (NE to complete)                                |
|---|--|--|
| <i>Section 42 Response Comments</i>   | <i>Applicant's response</i>  | <i>E.g., Agreed / Not Agreed / N/A</i>                 |
| Other than noise disturbance, construction impacts could include dust deposition, water quality impacts and disturbance from lighting. The draft CEMP at Appendix A10.2 addresses some of these issues, but Natural England would wish to see all necessary mitigation included in the final version of the document. | It is agreed that the CEMP accompanying the ES will include mitigation in respect of dust deposition, water quality impacts and disturbance from lighting. | To be agreed once NE has been able to review the CEMP. |

## **APPENDIX A – MEETING NOTES**

## Meeting Note

Project: Cleve Hill Solar Park  
Type: Consultation Meeting and Site Visit  
Date: 14 December 2016  
Time: 09:30 – 14:00  
Location: Judd's Folly Hotel, Syndale Park, London Road, Faversham, Kent, ME13 0RH and onsite at proposed Cleve Hill Solar Park site  
Expected: **Alison Giacomelli (AG)**, Natural England, Lead Adviser – Sustainable Development  
**Paul Hyde (PH)**, Natural England, Lead Advisor  
**Hugh Brennan (HB)**, Cleve Hill Solar Park Ltd, Project Developer  
**Mike Armitage (MA)**, Arcus, Ornithologist  
**Ross Allan (RA)**, Arcus, Landscape Architect  
**Mike Bird (MB)**, Arcus, Project Manager / Environmental Coordinator

### Agenda:

- Introductions – All expected attendees present.
- The proposed solar array and general progress to date
  - HB gave introduction to the site and project history.
- NSIP - The consenting process
  - MB gave background to planning and environmental work undertaken to date incl. PINS meeting and earlier informal consultation.
  - MB offered assistance from Cleve Hill Solar Park Ltd project team with legal and consenting issues if required.
- Ornithology considerations:
  - Arcus experience and capability
    - MB and MA provided background to Arcus and previous experiences with onshore wind farm developments on sites of similar nature and characteristic (in proximity to SPAs / estuarine habitats).

- Work undertaken to date / survey methods
  - MA introduced the summary report produced.
  - AG, PH and MA discussed survey methodologies and comparability of surveys carried out by Aecom and Arcus. AG/PH raised issue of substantial difference in numbers of some species between the different winters.
  - MA and MB described the surveys undertaken and the homogenous nature of the overall dataset created. MA clarified that Aecom and Arcus surveys are comparable as similar methods were used.
  - MA asked AG and PH whether 2.5 winters of data was sufficient to inform the assessment. AG and PH responded that if MA felt the data was collected consistently across the 2.5 winters and was sufficient to undertake a reliable and robust assessment then the data collected over these timescales is adequate to inform the assessment.
- Survey findings
  - PH stated that there was a general trend of decline in SPA species, and any habitat loss was a source of potential concern.
  - HB outlined the potential biodiversity benefits of solar development and outlined Cleve Hill Solar Park Ltd's commitment to improving biodiversity within the site.
  - MA outlined the findings of the bird surveys undertaken to AG and PH which were then discussed to ensure all parties understood the key findings.
  - Key wintering species were Brent Goose, Golden Plover and Lapwing, although a number of other qualifying species roosted near the sea-wall occasionally.
  - Marsh Harriers forage over the site throughout the year and there was some pattern to their activity.
  - The breeding bird assemblage on site was as expected; PH highlighted the importance of some species that may be listed on Schedule 1 of the WCA that may require special attention in the assessment.
  - It was noted that the Arcus survey results from 2016 recorded higher numbers of breeding birds than



Aecom. MA explained that Arcus may have achieved slightly better geographical coverage.

- PH specifically asked about Little Terns at Castle Coote. MA was not aware of any recorded during the survey, although in the breeding season, that area may not have been specifically observed. Both agreed that Little Terns were very unlikely to use the site on the landward side of the sea-wall.
- AG / PH welcomed the inclusion of nocturnal survey data.
- Next steps – assessment and mitigation
  - MA asked AG and PH about the HRA requirements with reference to the SPA citation which dates from 1993 and potentially ambiguous as to which species are required to be included in the HRA – particularly with reference to the breeding and wintering assemblage qualifications.
  - AG gave example where conservation objectives were used and there was discussion of the definition of the breeding and wintering bird assemblages, aggregating all waterbird species seen, the use of the Ramsar citation, potential for inclusion of Schedule 1 and red databook species. AG noted that the Supplementary Advice for the EMS provides some further definition.
  - MA asked AG and PH whether, for example, golden plover and lapwing are qualifying species of the SPA, with reference to 'nationally' important populations, or those species with more than 2000 birds (as specified in the Supplementary Advice notes).
  - **ACTION** - AG and PH to take advice from Natural England HRA specialists and respond with clarification of species list to be covered by HRA.
  - MA asked AG and PH what their key concerns were. AG responded that the site was used by SPA species and is therefore functionally linked to the SPA; hence there is a 'Likely Significant Effect' as defined by the Habitats Regs. AG wants to understand what the impact of the loss of this area would be and quantify this impact and identify acceptable mitigation solutions. AG would like to understand how Arcus will work out how important the site is and what the impact of the loss would be.
  - MB explained current status of layout and that a

potential starting point was to fill all available areas with panels, but that there was a clear acceptance that this would not be a viable design solution from an ornithological perspective, and there was a clear expectation that habitat management prescriptions would be incorporated into the development design.

- MA set out the proposed assessment approach (which Arcus had previously used in the HRA and mitigation proposals for wind farms near the Humber and Wash SPAs), the use of bird days to quantify the importance of areas of the site to different species (e.g. brent goose, golden plover, lapwing).
  - PH asked if there was any information on the effect of solar panels on specific species. In particular raptors, and asked whether there was potential to widen drains to create fleets which could be suitable for marsh harriers to nest.
  - **ACTION** – MA/Arcus to research literature for any information on use of solar farms by raptors (acknowledged that there was unlikely to be any substantive evidence).
- Non-avian Ecology summary
    - MA presented findings of ecology surveys undertaken.
    - **ACTION** – MB to send all ecology and ornithology baseline survey reports to AG and PH.
    - PH encouraged the promotion of pollinator packages in the grassland management areas (e.g. wayleaves along ditches).
    - Land management regime options (grazing, mowing etc were discussed at high level).
    - PH raised the lack of information on impacts on bats but AG and MA agreed that in light of the lack of suitable roost sites onsite there were no EPS issues with respect to solar development and bats.
    - PH raised the importance of invertebrate species linked to the Ramsar designation. Raised concern regarding the potential for site acting as sink for invertebrates from Ramsar site, if attracted by panels.
    - PH and AG asked for further information on impacts of solar on inverts, particularly with reference to the featured species of

the Ramsar citation.

- **ACTION** - AG to raise with NE invert specialist and revert.
- MA, PH and AG discussed GCN pilot project in Woking where a form of biodiversity offsetting was used. Likely to be used in Kent in the near future. General view developing is that site specific mitigation to protect smaller populations is not the most effective means of protecting GCN, but providing funding to schemes to protect and improve habitats for larger populations likely to be more effective.
- MA asked PH and AG what the timescales were for the validity of the ecology survey data as surveys were undertaken in 2014 and 2015. PH and AG agreed that there was a likely requirement for further GCN surveys in 2017, but that these could be limited to eDNA sampling to confirm presence/absence.
- Water Vole surveys would likely be required pre-construction but probably do not need to be updated prior to the application (assuming 2017/1stQ 2018).
- **ACTION** – AG to check and advise on any further survey requirements following review of baseline reports and receipt of information on timescales.
- Landscape and Visual considerations
  - AG confirmed that NE statutory remit extends to nationally designated landscapes (i.e., Kent Downs AONB) but that NE would likely defer to the AONB unit to advise.
  - RA set out proposed LVIA methodology and asked AG to provide any guidance or advice which is available to inform the assessment.
  - **ACTION** – AG to respond with any relevant guidance / advice relating to LVIA.
  - RA and AG agreed that local landscape advisors (Swale / Kent) would deal with local landscape interests such as the effect of the development on landscape character. AG stated NE do not expect to comment on landscape character.
  - AG and PH gave update on the status of the England Coast Path which is likely to follow the route of the Saxon Shore Way which follows the perimeter of the site. NE are in the process of defining the route. Consultation is expected to conclude next year. Kent County Council will adopt the route.

- AOB
  - All meeting attendees undertook a site visit between 12pm and 2pm, walking from approx. NGR 606230,164770 to NGR 604245,164855 and returning. Conditions were clear and sunny. High tide at Sheerness was 12.21pm (6.04 m).
  - Flocks of golden plover (c.2000) and brent goose (c. 1000-1500) were observed feeding/roosting on the eastern half of the site during the site visit. MA recalled that lower numbers of DB and GP/L. on site in winter 2015/16 was most likely due to warm weather and advanced crop growth reducing suitability of crop sward for these species. PH highlighted that this may be a continuing trend as the area was experiencing generally warmer winters.
  - Mitigation areas were briefly discussed, with reference to crop types and/or sacrificial areas and wet scrapes managed specifically managed for the wintering waterbirds that use the site. Drains were also looked at and there was clear evidence of close management and clearance (not sure if it is by landowner or IDB), concluding that there is opportunity to improve the drainage network for use by birds and other wildlife.

Date: 26 January 2017  
Our ref: DAS/11342/198096  
Your ref: 2238 Cleve Hill



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Dear Mike

**Discretionary Advice Service (Charged Advice)**

DAS/11342/198096

**Development proposal and location:** Cleve Hill Solar Photovoltaic Array, near Faversham, Kent

Thank you for your consultation on the above dated 06 October 2016, which was received on the same date.

This advice is being provided as part of Natural England's Discretionary Advice Service. Arcus Consultancy Services has asked Natural England to provide advice upon:

- The scope and results of the baseline ecological and ornithological surveys completed
- Implications of the above for the proposal, particularly in relation to The Swale Special Protection Area (SPA).
- At the meeting on 14 December 2016, a number of detailed questions were posed, which are considered in an annex to this letter.

This advice is provided in accordance with the Quotation and Agreement dated 17 November 2016.

The following advice is based upon the information within the following documents:

1. Cleve Hill Solar PV Array Ornithology Consultation Report (Arcus, Dec 16)
2. Cleve Hill Solar PV Array Non-avian Ecology Summary Report (Arcus, Dec 16)
3. Note of meeting held on 14 Dec 16 (Arcus, sent 23 Dec 16)

As the proposal is in the early stages of development a detailed layout is not yet available. Therefore the Potential Development Area (PDA) shown in figure 1 of the Ornithology Report, encompasses the entire area in which development could occur. It is recognised that the proposal may be refined to take account of constraints, including ecological and landscape considerations, during the course of the Environmental Impact Assessment.

**Designated Nature Conservation Sites**

**The Swale Special Protection Area (SPA) and Ramsar site**

The location of the proposal, outside, but adjacent to, The Swale SPA/Ramsar site, means that it has the potential to impact the features<sup>1</sup> for which the sites are designated, for example:

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<sup>1</sup> See Annex 2 for advice on the species which make up the wintering and breeding bird assemblages, and Ramsar features.

- Disturbance to birds using adjacent habitats during construction, any maintenance activities during operation, and during decommissioning;
- Loss of functionally linked habitat (ie. land outside the designated site but which is necessary for the ecological or behavioural functioning, in the relevant season, of a qualifying feature for which the site has been designated);
- Potential for the solar panels to act as an ecological sink to any Ramsar invertebrates that lay their eggs on water.

### **Scope of surveys**

Assessment of the scale and importance of the potential impacts identified above on the features of the designated sites depends on robust baseline survey data. The methodology for each of the surveys undertaken are set out in the Ornithology Report, and were discussed at the meeting on 14 December 2016.

I am satisfied that as the wintering bird surveys cover three winters (recognising that although the first winter only included Jan – Mar 14, this would have covered the time when, from our experience, the larger numbers of birds are found in the Swale), this is sufficient survey effort to gain a picture of bird use on the PDA and surrounds. At the meeting, Arcus clarified that, although there was a change in methodology for the surveys carried out between Sept 15 and Oct 16, the results allow comparison across the different wintering periods. The inclusion of flight activity surveys undertaken between Nov 15 and Oct 16, and nocturnal surveys in the winter 15-16 are welcomed. These additional surveys are helpful in understanding how key bird species use the area.

I am also satisfied that as the breeding bird surveys covered three seasons, this is sufficient. The inclusion of breeding raptor and owl surveys, are welcomed, which aid understanding of the significance of the site for these species groups.

My view is, therefore, that the coverage of surveys completed is sufficient to enable a thorough assessment of the potential impacts on SPA/Ramsar birds, and other important bird species.

### **Survey Results**

It is recognised that the results presented in the Ornithology Report are in summary form and that further information and analysis will be presented in the Habitats Regulations Assessment and Environmental Statement. Therefore, the following are initial comments, and I will comment in detail at later stages in the process.

Taking each of the potential impacts identified above in turn:

#### Potential disturbance to birds

The Ornithology Report shows that the intertidal area of the Swale and Faversham Creek, adjacent to the PDA, is used by a wide range of wintering SPA/Ramsar birds at both high and low tide. Therefore, there are potentially significant numbers of birds that may be impacted by visual and noise disturbance during construction. Depending on the predicted maintenance needs for the array, there may also be potential for disturbance to occur during operation.

I recommend considering whether disturbance during construction can be avoided by timing works outside the wintering period. Alternatively, the use of less disturbing methods of construction, eg avoiding impact piling, should be explored.

#### Loss of functionally linked land for wintering birds

It is now well-established that where European site qualifying features might rely on nearby but undesignated functionally linked land, then this is within the scope of Habitats Regulations Assessments (HRAs) of new plans or projects.

The Ornithology Report shows that dark-bellied brent geese were recorded within the PDA in all three winters, and our site visit demonstrated that they were present in this winter. Therefore, it can be concluded from the summary data that brent geese regularly use the PDA, and hence my view is that it is functionally linked to the SPA.

The Ornithology Report also shows that the PDA is used by wintering waders including dunlin, golden plover, lapwing and curlew. These are species that qualify in their own right (dunlin) or as part of the wintering assemblage (see Annex 1), therefore, should be included in the assessment of the loss of functionally linked land.

At the meeting on 14 December Arcus outlined the intention to use 'bird days' to quantify the importance of the site to different species. My view is that this seems a sensible way to assess how important the PDA is to the functioning of the SPA.

#### Loss of functionally linked land for breeding birds

As outlined in Annex 1, The Swale SPA is designated for its assemblage of breeding birds of grazing marsh, which is made up of species named on the citation and species 'characteristic' of the habitat. The Ornithology Report indicates that a number of these species have been recorded breeding within the PDA, eg: marsh harrier, cuckoo, yellow wagtail, reed bunting and lapwing (from tables 5 and 9).

In assessing whether the PDA is functionally linked to the SPA for any of the assemblage breeding birds, you should consider whether the PDA is necessary for the ecological or behavioural functioning of the species, as opposed to supporting species that are typical of grazing marsh habitat but also widespread and common. Based on the summary information presented, my initial view is that the PDA may be functionally linked to the SPA for marsh harrier, as part of the breeding bird assemblage. This is because, although a breeding marsh harrier territory was confirmed only in 2014, the flight activity surveys show that the PDA is regularly used for foraging. Therefore, the PDA could be important for the ecological functioning of the marsh harrier component of the breeding bird assemblage, by providing important foraging habitat. However, the SPA populations of other typical grazing marsh species present within the PDA, for example reed bunting, are probably not dependant on the PDA for their ecological functioning, and therefore, are not functionally linked.

#### Potential for solar panels to act as an ecological sink to Ramsar invertebrates

There has been some research<sup>2</sup> that has demonstrated that insects that lay their eggs in water mistake solar panels for water bodies and try and lay their eggs on them. This can then impact their reproductive biology. The paper goes on to suggest that using white strips to break up the panel can reduce their attractiveness to insects.

The Swale Ramsar site was designated for its wetland plant and invertebrate communities. The citation mentions one species that lays its eggs in water and is attracted to horizontally polarised light: the dolichopodid fly *Campsicnemus majus*.

The Non-Avian Ecology Report states that a relatively low number of invertebrates were recorded for the size of site. Therefore, the risk to polarotactic insects may be low. However, my view is that the potential risk to the wetland invertebrate community should be considered in the HRA.

#### **Protected landscape**

The PDA is within 5km of the Kent Downs AONB. Therefore, if there are any sight lines from the AONB to the PDA, I would expect these viewpoints to be included in a Landscape and Visual Impact Assessment. However, unless any impacts on the AONB were assessed as significant, Natural England would not give bespoke landscape advice at the examination stage.

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<sup>2</sup> Horvath et al. 2010. Reducing the maladaptive attractiveness of solar panels to polarotactic insects. Conservation Biology 24 (6) pp. 1644 - 1653



At the meeting on 14 December, Arcus asked for guidance to inform the landscape assessment. The following is Natural England's general advice on the scope of EIAs:

### **Landscape and visual impacts**

Natural England would wish to see details of local landscape character areas mapped at a scale appropriate to the development site as well as any relevant management plans or strategies pertaining to the area. The EIA should include assessments of visual effects on the surrounding area and landscape together with any physical effects of the development, such as changes in topography.

The EIA should include a full assessment of the potential impacts of the development on local landscape character using landscape assessment methodologies<sup>3</sup>. We encourage the use of Landscape Character Assessment (LCA), based on the good practice guidelines produced jointly by the Landscape Institute and Institute of Environmental Assessment in 2013. LCA provides a sound basis for guiding, informing and understanding the ability of any location to accommodate change and to make positive proposals for conserving, enhancing or regenerating character, as detailed proposals are developed.

Natural England supports the publication *Guidelines for Landscape and Visual Impact Assessment*, produced by the Landscape Institute and the Institute of Environmental Assessment and Management in 2013 (3rd edition). The methodology set out is almost universally used for landscape and visual impact assessment.

In order to foster high quality development that respects, maintains, or enhances, local landscape character and distinctiveness, Natural England encourages all new development to consider the character and distinctiveness of the area, with the siting and design of the proposed development reflecting local characteristics. The EIA process should detail any layout alternatives together with justification of the selected option in terms of landscape impact and benefit.

The assessment should also include the cumulative effect of the development with other relevant existing or proposed developments in the area. In this context Natural England advises that the cumulative impact assessment should include other proposals currently at Scoping stage. Due to the overlapping timescale of their progress through the planning system, cumulative impact of the proposed development with those proposals currently at Scoping stage would be likely to be a material consideration at the time of determination of the planning application.

The assessment should refer to the relevant National Character Areas<sup>4</sup> which can be found on our website. Links for Landscape Character Assessment at a local level are also available on the same page.

### **Protected Species**

This proposal, as presented, has the potential to affect species protected under European or UK legislation. The Non-avian Ecology Report confirms the presence of a small population of great crested newts, foraging and commuting bats, reptiles and water voles. Natural England has produced [Standing Advice](#) which is available on its website. Whilst this advice is primarily designed to assist local planning authorities better understand the information required when assessing the impact of developments upon protected species, it also contains a wealth of information to help applicants ensure that their applications comply with good practice guidelines and contribute to sustainable development. Please refer to this Standing Advice for further information on what information the authority may require in terms of survey and mitigation proposals.

Further information can also be obtained from [The Institute of Ecology and Environmental](#)

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<sup>3</sup> <https://www.gov.uk/guidance/landscape-and-seascape-character-assessments>

<sup>4</sup> <http://www.naturalengland.org.uk/publications/nca/default.aspx>



## **Biodiversity enhancements**

Guidance on enhancements has been produced by the BRE Solar Centre<sup>5</sup>. In particular, solar arrays offer opportunities for enhancements through the management of the grassland between the panels. As discussed at our meeting on 14 December, the sowing of a seed mix to benefit invertebrates, including bumblebees, would be valuable in this location. In addition, the presence of ditches within the PDA offers the opportunity to enhance the water vole population of the site.

This letter concludes Natural England's Initial Advice within the Quotation and Agreement dated 17 November 2016.

As the Discretionary Advice Service is a new service, we would appreciate your feedback to help shape this service. We have attached a feedback form to this letter and would welcome any comments you might have about our service.

The advice provided in this letter has been through Natural England's Quality Assurance process

The advice provided within the Discretionary Advice Service is the professional advice of the Natural England adviser named below. It is the best advice that can be given based on the information provided so far. Its quality and detail is dependent upon the quality and depth of the information which has been provided. It does not constitute a statutory response or decision, which will be made by Natural England acting corporately in its role as statutory consultee to the competent authority after an application has been submitted. The advice given is therefore not binding in any way and is provided without prejudice to the consideration of any statutory consultation response or decision which may be made by Natural England in due course. The final judgement on any proposals by Natural England is reserved until an application is made and will be made on the information then available, including any modifications to the proposal made after receipt of discretionary advice. All pre-application advice is subject to review and revision in the light of changes in relevant considerations, including changes in relation to the facts, scientific knowledge/evidence, policy, guidance or law. Natural England will not accept any liability for the accuracy, adequacy or completeness of, nor will any express or implied warranty be given for, the advice. This exclusion does not extend to any fraudulent misrepresentation made by or on behalf of Natural England.

Yours sincerely

Alison Giacomelli  
Sussex and Kent Area Team

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<sup>5</sup> <https://www.bre.co.uk/filelibrary/pdf/Brochures/NSC-Biodiversity-Guidance.pdf>

## **Annex 1**

### **European Protected Species**

A licence is required in order to carry out any works that involve certain activities such as capturing the animals, disturbance, or damaging or destroying their resting or breeding places. Note that damage or destruction of a breeding site or resting place is an absolute offence and unless the offences can be avoided (e.g. by timing the works appropriately), it should be licensed. In the first instance it is for the developer to decide whether a species licence will be needed. The developer may need to engage specialist advice in making this decision. A licence may be needed to carry out mitigation work as well as for impacts directly connected with a development. Further information can be found in Natural England's ['How to get a licence'](#) publication.

If the application requires planning permission, it is for the local planning authority to consider whether the permission would offend against Article 12(1) of the Habitats Directive, and if so, whether the application would be likely to receive a licence. This should be based on the advice Natural England provides at formal consultation on the likely impacts on favourable conservation status and Natural England's [guidance](#) on how the three tests (no alternative solutions, imperative reasons of overriding public interest and maintenance of favourable conservation status) are applied when considering licence applications.

Natural England's pre-submission Screening Service can screen application drafts prior to formal submission, whether or not the relevant planning permission is already in place. Screening will help applicants by making an assessment of whether the draft application is likely to meet licensing requirements, and, if necessary, provide specific guidance on how to address any shortfalls. The advice should help developers and ecological consultants to better manage the risks or costs they may face in having to wait until the formal submission stage after planning permission is secured, or in responding to requests for further information following an initial formal application.

The service will be available for new applications, resubmissions or modifications – depending on customer requirements. More information can be found on [Natural England's website](#).

## Annex 2

### The Swale SPA

The HRA of the Cleve Hill Solar Farm should consider the potential impacts of the project against the published Conservation Objectives<sup>6</sup> for The Swale. Supplementary advice on the Conservation Objectives is also available<sup>7</sup>, and should be used in conjunction with the advice in this letter.

Information on The Swale is also found on the standard data form<sup>8</sup> on JNCC's website. Where there is a discrepancy between the features listed on the standard data form and the citation, the latter is the document to assess the project against. This approach has been tested through the NSIP examination of the Richborough Connection Project.

At the meeting on 14 December, Arcus requested advice on the HRA requirements with reference to the SPA citation, particularly in regard to the breeding and wintering assemblages.

#### Non-breeding assemblage

The Swale citation and Conservation Objectives list one of the qualifying features as the 'waterbird assemblage'. All 'waterbirds' (as defined by the Ramsar convention) form part of the assemblage. It is the assemblage as a whole that is the feature to be assessed within the HRA, with reference to the Conservation Objectives.

The integrity of the assemblage (for both breeding and non-breeding) is generally recognised as a product of both abundance and diversity. However, as it is impractical to list all the waterbird species and assess each one individually, it is generally recognised that some constituent species contribute more towards the integrity of the overall assemblage than others, and the assessment should therefore, focus on these.

Recognising this, and as a tool to assist with assessing the ecological impacts of any plan/project on the waterbird assemblage feature, it is useful to identify the 'main component species'. These are:

- (i) Those present in nationally important numbers and
- (ii) Migratory species present in internationally important numbers (which may also be qualifying features on their own right – although this is not always the case) and
- (iii) Those that occur in the assemblage in numbers >2000 individuals and
- (iv) Named component species otherwise listed on SPA citation

For (ii) where qualifying features are assessed individually, there is no requirement to repeat for the assemblage assessment. However, the possibility that any effects could have a cumulative effect with any effects for other component species, that might then accumulate to be significant for the assemblage as a whole, should be explored in the HRA.

The Swale citation states that it qualifies under Article 4.2 of the Birds Directive as it regularly supports over 20,000 waterfowl, with an average peak count of 57,600 birds recorded in the five winter period 1986/7 to 1990/1. It states that this total includes 17 species in internationally or nationally important numbers, but does not name them.

In this situation, and as a matter of best practice, the most recent data from BTO's Wetland Bird Survey (WeBS) should be considered to augment the information provided in the citation. Looking at the most recent (five year peak mean 2010/11 – 2014/15) WeBS counts for the Swale estuary<sup>9</sup>, the

<sup>6</sup> <http://publications.naturalengland.org.uk/publication/5745862701481984?category=6528471664689152>

<sup>7</sup> <https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK9012011&SiteName=swale&countyCode=&responsiblePerson=>

<sup>8</sup> <http://jncc.defra.gov.uk/pdf/SPA/UK9012011.pdf>

<sup>9</sup> Frost, T.M., et. al. 2016. *Waterbirds in the UK 2014/15: The Wetland Bird Survey*. BTO/RSPB/JNCC. Thetford. <http://www.bto.org/volunteer-surveys/webs/publications/webs-annual-report>

following 20 species currently occur in internationally (\*) or nationally important numbers (criteria i and ii, above):

|                              |                          |
|------------------------------|--------------------------|
| European white-fronted goose | Dark-bellied brent goose |
| Shelduck                     | Wigeon                   |
| Teal                         | Pintail                  |
| Shoveler                     | Little egret             |
| Oystercatcher                | Avocet                   |
| Golden plover                | Grey plover              |
| Lapwing                      | Sanderling               |
| Dunlin                       | Ruff                     |
| Black-tailed godwit*         | Bar-tailed godwit        |
| Green sandpiper              | Greenshank               |

In addition, knot is found in numbers greater than 2000 (criterion iii).

The current five year peak mean for curlew on the Swale estuary is 1137 (2010/11- 2014/15), which is below the threshold for national importance. However, the previous five year peak mean was 1413 (2009/10 – 2013/14) which was above the threshold for national importance. Taking into account the poor conservation status of this species and the likelihood that curlew will use functionally linked land for feeding purposes, I advise treating curlew as a 'main component species' within the assemblage.

This produces a total of 22 main component species.

### **Breeding bird assemblage**

The identification of main component species for the breeding assemblage is slightly different to that for wintering. The main component species are:

- (i) those bird species 'characteristic' of the particular SPA bird habitat; and
- (ii) 'named components' listed on the SPA citation.

The Swale citation names certain species in the 'typical assemblage of breeding species' for grazing marsh, some of which are widespread and common (criterion ii). These are:

|              |              |          |
|--------------|--------------|----------|
| Shelduck     | Mallard      | Moorhen  |
| Coot         | Lapwing      | Redshank |
| Reed warbler | Reed bunting |          |

In terms of the species characteristic of the particular habitat (criterion i), in this case, grazing marsh, the starting point should be the scoring species for the lowland damp grassland SSSI bird assemblage features<sup>10</sup>. This includes breeding ducks, waders, yellow wagtail, marsh harrier and others.

As noted above for the non-breeding assemblage, the integrity of an assemblage is taken to be a product of both abundance and diversity. In turn, the diversity of the assemblage depends on the species richness, abundance and the relative 'importance' (an assessment of the conservation status of each assemblage component). Each component makes a different contribution to the diversity of the assemblage, and changes to some components may be considered to affect diversity more than others. Negative changes to small numbers of relatively important assemblage

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<sup>10</sup> Drewitt, A.L., Whitehead, S. and Cohen, S. 2015. *Guidelines for the Selection of Biological SSSIs. Part 2: Detailed Guidelines for Habitats and Species Groups. Chapter 17 Birds*. Joint Nature Conservation Committee, Peterborough. [http://jncc.defra.gov.uk/pdf/SSSI\\_Chptr17\\_Birds2015June.pdf](http://jncc.defra.gov.uk/pdf/SSSI_Chptr17_Birds2015June.pdf)

components may have a similar overall effect to negative changes in larger numbers of less important components.

### **The Swale Ramsar site**

JNCC have published Information Sheets on Ramsar wetlands on their website<sup>11</sup>. The Swale qualifies under Ramsar criterion 2 its vulnerable, endangered, or threatened plant and invertebrate communities; under criterion 5 for its assemblage of over 20,000 waterbirds, and under criterion 6 as it supports 1% of the population of a number of named waterbird species.

Natural England has not produced Conservation Advice packages, including Conservation Objectives, for Ramsar sites. This is because it is considered that the Conservation Advice packages for the overlapping European Marine Site will be, in most cases, sufficient to support the management of Ramsar interests.

The Ramsar Information Sheet for The Swale lists the qualifying species/populations under Ramsar criterion 6 (in section 14). Impacts on these species should form part of the HRA.

The Ramsar Information Sheet also lists noteworthy fauna (in section 20), which make up part of the assemblage of waterbirds. However, as Natural England considers that the Conservation Objectives for SPAs cover the management of Ramsar interests, and the SPA and Ramsar site were designated at the same time under the same criterion, I recommend only carrying out one assemblage assessment, on the species named under the SPA advice above.

In terms of the wetland plant and invertebrate communities, potential impacts on the habitats which support them are covered in the supplementary advice on conservation objectives<sup>12</sup> for The Swale SPA. Examples of the species which make up the plant and invertebrate communities are found in the noteworthy flora and fauna sections of the Ramsar Information Sheet.

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<sup>11</sup> <http://jncc.defra.gov.uk/pdf/RIS/UK11071.pdf>

<sup>12</sup> <https://designatedsites.naturalengland.org.uk/Marine/SupAdvice.aspx?SiteCode=UK9012011&SiteNameDisplay=The+Swale+SPA>



## Meeting Notes

Project: Cleve Hill Solar Park

Type: Natural England Consultation

Date: Monday 23 July 2018

Time: 11.15am –1:30pm

Location: Natural England Office, International House, Dover Place, Ashford TN23 1HU

Expected: Alison Giacomelli [AG] – Natural England  
Paul Hyde [PH] – Natural England  
Hugh Brennan [HB] – Cleve Hill Solar Park Ltd  
Simon McCarthy [SMcC] – Cleve Hill Solar Park Ltd  
Mike Armitage [MA] – Arle Ecology  
Mike Bird [MB] – Arcus Consultancy Services Ltd

### Notes:

MB thanked NE for the detailed S42 response. Previously talked about late summer application but highlighted importance of bottoming out issues in the S42 process prior to application.

Aim of meeting to identify key issues and actions to progress. There would be further meeting with all members of the HMSG.

### **Run through the NE response point by point.**

MA asked about the JNCC 2016 review and if this had implications for the application – e.g. could site be designated in the same timeframes as the application.

AG did not know what the government's current position is in relation to the 2016 review.

AG not expecting any pSPA processes to start imminently in this area

**ACTION** – AG to check if the application site has been identified as possible extension to the SPA.

MA (post meeting) has checked JNCC pages – there is nothing currently indicating action further to the review.

AG highlighted that site is used frequently by qualifying interest species and is clearly functionally linked and stated that the assessment has treated it as such in the PEIR.

Regarding brent geese (and same principles apply in relation to golden plover and lapwing), NE are seeking further clarity on the metrics used to define the mitigation area.



AG highlighted the need for cropping information to assess how representative are the four seasons of baseline data.

MB – some issues with change in landowner leading to difficulty in acquiring the historical info. Agreement that the assessment of representativeness should also consider the future cropping plan in the absence of the Development.

AG – 4 seasons of data is a good set of baseline data to understand the losses. But AG feels that we have an area and we have presented metrics to fit the area rather than fitting the area to the use of the site. AG feels information on the variability of the cropping on the site is crucial to our understanding of the importance of the site in a wider SPA context.

Some discussion about how KWT counts/WeBS counts for the sector compare with our counts.

Discussion around use of mean vs peak-mean metric, but no specific resolution made in the meeting – further work to be presented, including application of, for example, confidence limits on means.

AG – if the 4 years of data is representative in terms of the variation, then a mean-based approach would appear to be more appropriate, but the info on past and potentially also future cropping is important to help justify this.

MA – a mean-based approach with confidence levels set out in more detail could be appropriate. A peak mean would be a more precautionary approach.

AG highlighted that the preliminary assessment considers that the HMA falls short of providing for losses to the development.

AG/PH considered that exclusion of the whole southern field for brent goose in the HMA is precautionary, that it may be used by geese at certain times.

MA – set out an alternative approach of considering the loss of just the developed area and then adding this to the HMA existing use as a slightly different approach. AG / PH agreed this could be helpful to see.

Discussion about the capacity of the HMA and its appropriate management. NE clear that artificial fertiliser not desirable, especially near the SSSI, and that best conditions for geese do not marry well with suitable conditions for plovers/lapwing.

MB highlighted that the existing baseline includes extensive fertilizer application as part of the existing arable use.

PH also advised that there may be problems from supplementary feeding associated with increased organic input and run-off as birds defecate in a small concentrated area, noting that this was gut feel rather than evidence based.





PH thought that something like the low-input organic grassland system would be suitable – c. 10 tonnes/ha of organic fertiliser, although as this isn't under that system, it could be tweaked according monitoring and adaptive management.

Would there be a time lag? PH – probably not for geese, but yes for plover/lapwing. Possibly leaves things short, at least in short-term, for GP/L (depending on the metric considered most appropriate for determining losses).

Some discussion about current fertiliser application – 1 m cross-compliance margin, but should have stand-off at 6-12 m when applying fertiliser/pesticides. Need to adhere to requirements in the HMA to minimise impact on adjacent SSSI.

MA raised that adaptive management, with low-level supplementary feeding if considered necessary to compensate feeding losses for geese might be workable. PH highlighted that there might still be issue with GP/L.

PEIR Chapter suggests more land is needed, but this depends on the accepted metric to describe loss and capacity of the HMA. Further proposals need to be drawn up and presented.

MA – raised that not all birds are always feeding onsite, likely that a large proportion are roosting. We've worked on feeding as a worst case, but this factor makes use of a less precautionary metric more appropriate.

PH agreed that there was likely to be more roosting than feeding, given the resources in the intertidal zone offshore.

AG – the key is to reach agreement on the carrying capacity of the grassland and agreeing an approach between NE, RSPB and KWT from the alternative approaches which have been presented in the s42 responses.

#### **Discussion about SSSI inclusion in mitigation.**

AG – made clear that the SSSI land should not be used in any calculations regarding compensatory habitat. MA - confirmed that this was certainly the case and if the PEIR documentation was not clear in this regard we will make sure it is in the final documentation. CHSP were looking to demonstrate that the site is not an island and that the use of surrounding land is also relevant but increased use of the SSSI land has not been factored in to the calculations.

MA stated that it was never the case to offset any losses with increase in SSSI numbers. Wording in assessment in PEIR has caused some confusion in this respect. MA to amend in ES to clarify.

NE consider it is a good thing to include and management measures for the area can be drawn up with NE, but it is not considered to be any net gain as it is in favourable condition already.





MA highlighted that appropriate management can take it beyond favourable condition and net gain is possible. Somehow this must be acknowledged in the assessment, otherwise there is little incentive for including it in the proposals.

**Discussion regarding marsh harrier impacts.**

MB described change in layout – pinch points widened by having new minimum 15m set back from ditch bank tops, so minimum separation of 30 (32 including ditch)) metres at 'pinch-points'. Most of area wider than this and up to c. 80m in places. Also 15m minimum from borrow-dyke at northern boundary.

MA stated that ES assessment would include comparison of quantity of existing grassland at headlands etc, with new extent of potentially available grassland to marsh harriers with the Development.

MB asked what NE would like to see in the way of enhancements for marsh harrier.

PH suggested increased reedbed areas – shallow profiling to parts of ditches to promote larger area of reed growth. Ensure these have good connectivity within the landscape.

Noise/visual disturbance – discussion was brief and agreed that NE had set out clearly the expectations for the revised assessment in the ES.

Dust, water quality etc – discussion that CEMP/mitigation demonstrates that these will not affect qualifying interests/designated habitats – needs to be set out in shadow AA as recent case law dictates effects can't be screened out from LSE by mitigation.



## Meeting Note

Project: Cleve Hill Solar Park  
Type: Habitat Management Steering Group – Meeting 1  
Date: Wednesday 21 February 2018  
Time: 9.30am – 1:00pm  
Location: Natural England, International House, Ashford, Kent  
Present: Alison Giacomelli, Natural England [AG]  
Paul Hyde, Natural England [PH]  
Dora Querido, RSPB [DQ]  
Julian Nash, RSPB (apologies)  
Greg Hitchcock, Kent Wildlife Trust (KWT) [GH]  
Kevin Duvall, KWT [KD]  
Simon McCarthy, Cleve Hill Solar Park Ltd [SM]  
Mike Armitage, Arcus Consultancy Services Ltd [MA]  
Mike Bird, Arcus Consultancy Services Ltd [MB]

### Notes:

MB – introduced site and timescales

MA – summarised survey effort

KD / BH asked questions relating to use of the site by ruff, dunlin, breeding lapwing and other specific species.

PH discussed whether all species recorded would use the site at the same time, and whether the Habitat Management Area (HMA) would be expected to accommodate all species, or if certain species may dissuade others from using parts of the site. Highlighted that site is an important area of functional land and birds may preferentially use it.

AG – asked about the land – use history, and how far back records were available for. MA / MB explained there are various sources of info and for parts of the site, previous years survey data are available (pre-2014) from the substation surveys. MB/MA agreed to obtain as much info as possible in this regard.

KD – explained that annual honorary warden reports should be available and that he would try to obtain and send over.

All – general discussion regarding the applicability of WeBS data suggested it was good for trends but not necessarily for identifying usage of specific sites.



MB – explained the site design process and rationale for current position. Current plan is for panels covering c. 260 ha out of 360 ha available for development within the red-line, so there is c. 100 ha of habitat that can be managed outside the panels.

MB – explained approach being taken to the land beneath the panels and the work being progressed with Lancaster University to inform this.

KD – asked if there will be a buffer between the KWT reserve and the development. MB explained that there was a minimum set back from the top of the borrow dyke to a fence of 5 m and then a further separation of 5 m to the panels themselves. In many locations the separation will be greater due to the panel alignments, the location of the track across the northern boundary etc.

KD – discussed the challenges of managing water levels within the KWT reserve and GH/KD agreed that there could be improvement in water level management from KWT perspective as currently the landowner and KWT have conflicting aims in respect of retaining water onsite (KWT) vs. draining the land as effectively as possible (landowner).

AG – asked about the set back of the panels from ditches, how wide do areas need to be to accommodate marsh harriers? MA – need to look into this, but not likely to be much specific in literature.

SMcC – explained that all Wirsol's operational sites have sheep on them and that was the intention at Cleve Hill.

All – wider discussion regarding the management of vegetation to allow for O+M access to the site throughout operation.

SMcC – explained how grazing would typically take place, using stock fencing and compartmentalising large fields.

All – general discussion regarding water vole incl. poaching of water vole habitat by livestock.

All- ongoing discussion regarding ditches, ditch bank habitats and management. Water levels very dependent on rainfall and climate, this could be made less variable through water holding structures in ditches such as boards or weirs to control water levels.

All – discussion of IDB maintained ditches and further discussion with IDB required.

All – discussion of reed bed habitats and wider benefits of managing water levels for that habitat. KD mentioned that due to low water levels, some of the reed beds are sometimes at risk of drying out,

All – discussion of using stock fencing to keep livestock away from areas of biodiversity enhancement, such as wetter ditches and reed beds.



All – ditch management discussion – best practice management, rotational management all discussed.

KD/MB discussed the ownership of the borrowdyke on the northern boundary. MB to check.

Oare Gravel pits housing development near Faversham was mentioned as a cumulative development.

MB discussed the potential options for permissive rights of way through the site and the potential for impacts on birds. General agreement that the impacts could be complex – in some cases new routes may draw users away from more sensitive areas, in others, they could encourage users into more sensitive areas. Proposals need to be fully considered and assessed.

May be requirement to screen wildlife refuge areas from public rights of way users, with potential for natural screening and hides etc

All – discussion around improvements in the management of the SSSI adjacent to the proposed HMA. Sometimes this area is overgrazed and this could be improved. Improved management of that area could contribute to an uplift in the wider benefit of the HMA.

PH – discussed invertebrates / pollinators and discussed species mixes best suited to encouraging healthy invertebrate populations, need to provide nectar sources early, mid and late seasons.

MA – explained the calculation of the HMA and the multiple metrics that are available to inform that calculation. Some discussion about new concept and need to be clear on how area is calculated.

AG – asked if the area would be able to accommodate the peak numbers of the species using the site. Mike A responded yes, and explained the spatial and temporal spread of the data.

GH asked about the relative importance of the site in wider SPA terms. Gen discussion of where the geese might be when not onsite

DQ – referenced the Solent study which has been undertaken using species counts rather than bird days. DQ said it was difficult to cross ref between the two methods and asked if data could be provided in such a way as to give the ability for comparison with the Solent project.

MA - to investigate if and how the principles applied in the Solent Waders and Brent Goose Strategy could be applicable in determining the size and nature of the HMA.

PH – asked whether the birds in question preferred arable habitat or grazing marsh habitat and requested more info of the carrying capacity of arable land for geese.

AG – need to assess if whole of HMA area would be available to birds or if there would be stand off from panels (i.e. displacement from proximity of panels).



All – discussed the principal of using the 40 ha set aside + some more specific management provisions on the SSSI land adjacent to mitigate for loss of availability of arable land. Agreement that once more data had been collected, the appropriateness of the size and location of this area could be better judged.



**CLEVE HILL**  
SOLAR PARK

## Meeting Note

Project: Cleve Hill Solar Park  
Type: Habitat Management Steering Group – Meeting 2  
Date: Wednesday 18 April 2018  
Time: 9.30am – 12:00pm  
Location: Natural England, International House, Ashford, Kent  
Present: Alison Giacomelli, Natural England [AG]  
Paul Hyde, Natural England [PH]  
Dora Querido, RSPB (apologies)  
Julian Nash, RSPB [JN]  
Greg Hitchcock, Kent Wildlife Trust (KWT) [GH]  
Kevin Duvall, KWT [KD]  
John McAllister, KWT [JMCA]  
Simon McCarthy, Cleve Hill Solar Park Ltd [SM]  
Mike Armitage, Arcus Consultancy Services Ltd [LN]  
Mike Bird, Arcus Consultancy Services Ltd [MB]

### Notes:

MB – explained current status of the project, design for PEIR finalised and assessment process for the PEIR underway.

MB – showed plans with the latest design and explained the changes from previous layouts.

MB – gave brief summary of the meeting with KWT on 17 April and explained that the red line boundary is in the process of being finalised for the purposes of PEIR to include all of the land required to facilitate the development throughout its operational life. This includes adding in the SSSI land to the east to the habitat management proposals.

MB outlined the main areas to be discussed – the habitat management area and the landscape and biodiversity management plan.

MB explained that CHSPL is very keen to receive input from KWT, NE and RSPB using their experience and professional expertise to get the best outcomes for the site.

AG explained that for HRA purposes the SPA/SSSI land technically can't be used as mitigation land as the landowner has an existing obligation to maintain the designated status, however it is recognised that the SSSI land does afford potential for improvements in management for biodiversity.

PH raised the issue of disturbance effects in areas of the HMA that are close to the sea wall footpath and that if birds would not use those areas, they couldn't be included in the total



land available in the HMA. MA to investigate data to see if that effect is evident in the baseline.

JMcA asked about the location of the HMA refuge in relation to disturbance – would it be better sited at the western end where there are fewer walkers/dogs. MA explained that this had been considered but eastern end had been preferred because it can be contiguous with the SSSI grazing marsh near the Sportsman and the baseline data showed that there has been more use of fields at the eastern end, perhaps indicating that human/dog-walking disturbance is not a critical issue. Further consideration to be given.

GH – set out that the value of the site varies considerably between seasons, and it is important to consider how that variation is considered in the assessment. As things stand KWT do not consider that enough land has been provided for the HMA.

GH agreed to issue KWT survey data including all annual reports (incl. this year), which will allow better assessment of variation in numbers between seasons to see if baseline data collected and analysed are typical and representative of the variation.

MA – following receipt of the data, CHSPL will consider how best to collate and use all data sources in the PEIR.

JMcA – raised whether unsustainable practices such as mowing and application of chemical fertilizer were necessary within the HMA and questioned whether natural regeneration or organic inputs and grazing would form a reasonable alternative. MA thought natural regeneration would not provide resources quickly enough to compensate for lost resources.

All agreed that sustainable practices and organic inputs would be preferential within the management regime,

JN – set out that from experience, an appropriate grazing regime and water management are the keys to achieving a successful arable reversion. Further discussion of subsoiling to relieve soil compaction and seek to improve soil structure.

JMcA - queried if it were known whether a "mineral pan" existed onsite. MB to check.

JN – suggested a site visit to Great Bells Farm on Sheppey to see the arable reversion project there, which is approx. 8 years in. MB to circulate dates.

Water levels were discussed, incl. the potential to raise the water levels in ditches. General agreement that this would be a positive intervention.

JMcA provided a quick summary of recent discussions between KWT, the EA, IDB Natural England, and the landowner regarding the management of the water levels in the ditches.

MB asked for a precis of the discussions and management prescriptions coming out of those discussions. JMcA to provide.



MB – queried the status of the sluice in the west of the site and what function it serves. JMCA stated that it was a sluice gate and a non-return valve that allows outflow from the site into the sea.

SM agreed that going forward the site offers the opportunity to create a close working relationship between CHSPL and KWT to manage water levels.

JN – suggested scrapes could be introduced to the HMA area to be of greater benefit and promote a mosaic of different habitats.

JN – discussed whether it would be possible to hydrologically disconnect the HMA area from the wider site to allow an alternative water management regime to be developed – likely raising water levels in the HMA.

PH asked if enough is known about hydrology to be confident that there is sufficient water to raise levels and create scrapes.

JMCA raised that the landownership boundary on the perimeter of the site is mid dyke, so the landowner has equal control of the management of the borrow dyke which forms the southern boundary of the nature reserve.

All – agreed that more work was required to understand the hydrological regime onsite and to create proposals for water management onsite.

JN – asked about invasives, esp. parrot's feather. MB – habitat survey did not record it; only invasive mentioned was duckweed *Lemna sp.*

JN asked whether the site would be compartmentalised using fencing.

MB responded that the perimeter fence would do this to an extent, and that ditches would form wet fences in some locations, however there wouldn't necessarily be compartmentalisation of areas within the perimeter fence, other than when the grazier required temporary fencing for stock control.

JN agreed that this was preferred to give flexibility and guide grazing pressure which would likely vary in the operational lifetime of the project as the soil fertility decreases following the cessation of fertilizer inputs. JMCA advised that electric fencing around ditches may be necessary to prevent overgrazing during initial phase when high density grazing needed in grassland to control ruderals.

JMcC / AG / GH discussed the existing and future use of the site by marsh harrier. A graphical representation of "corridor" widths across the site was requested – MB to provide.

All – agreed that the literature is limited in its ability to inform the development of proposals to manage the site to be of benefit to marsh harrier. There was some agreement that the wider "corridors" between panels if managed to be of benefit to marsh harrier could provide an extension to existing habitat. JMCA/JN raised that this should be extended to the perimeter ditches as well as the ditches that cross the site.





AG – suggested that widening corridors between compartments north of the power lines but narrower ones south of power lines could provide better availability for foraging harriers without losing energy capacity. Also asked if it is possible to take out some pinch points where panel layout forms narrowest points along corridors.

General proposals for ditch management included:

- Widening
- Introduction of reeds
- Raising water level

Permissive access to the site was discussed. While biodiversity enhancement in areas where public access may also be introduced may affect the effectiveness of the proposals but this shouldn't discourage CHSPL from seeking to enhance in the same areas that permissive access routes are proposed. General agreement that a new circular route in the east from the Sportsman could be a positive enhancement and could also serve to reduce disturbance to the SPA through reducing footfall in the designated area.

Grazing was discussed – SM stated the aim to graze sheep onsite and that a third party grazier would likely be involved. KWT stated that it would be likely that grazing by sheep and cattle would take place in the HMA, and recognised that just sheep would be more appropriate within the park as the solar PV structures could be damaged by larger livestock.

MB asked whether KWT would be interested in grazing some of the land with their herd. JMCA requested the areas of land to be grazed, to be considered further by KWT following receipt.

AG – encouraged MA to think about long term trends in site management on the site when undertaking the assessment, with information on long term crop rotations being important in influencing numbers of geese and lapwing/plovers.

### **Actions**

MA to examine baseline data for evidence of disturbance effect in areas close to sea wall footpath

MB to provide summary of site areas, including areas of land to be grazed to JMCA and wider KWT team

KWT to provide support and advice to CHSPL on grazing detail incl. breeds and grazing pressure.

KWT to provide summary of desirable water management measures

KWT to provide narrative of previous water management agreement (which fell through before implementation) with landowner



KWT to provide summary of boundary reserve aims

MB to set up availability poll for site visit to Great Bells Farm on Sheppey

MB/MA to set up call with DQ for discussion about HMA/bird-days approach

MA to investigate possible synergies of approach with Solent Waders and Brent Goose Strategy



## Meeting Note

Project: Cleve Hill Solar Park  
Type: Habitat Management Steering Group – Meeting 3  
Date: Wednesday 16 May 2018  
Time: 13:00  
Location: Great Bells Farm RSPB Nature Reserve, Sheppey  
Present: Alison Giacomelli, Natural England [AG]  
Paul Hyde, Natural England [PH]  
Dora Querido, RSPB (apologies)  
Julian Nash, RSPB [JN]  
Nick May, RSPB [NM]  
Kevin Duvall, KWT [KD]  
Simon McCarthy, Cleve Hill Solar Park Ltd [SM]  
Hugh Brennan, Cleve Hill Solar Park Ltd  
James Senior, Counter Context  
Mike Armitage, Arcus Consultancy Services Ltd [LN]  
Mike Bird, Arcus Consultancy Services Ltd [MB]

### Notes:

195 hectares no works on 50 ha

Compensation for freshwater habitat losses MEASS.

Poor environmentally when in arable

Better in grassland management but still poor.

EA brought in rspb through tender to manage site in 2010.

Water equals wetland birds.

Lapwing and redshank good indicators. Also skylark

Easy to monitor and good data.

Used liar data to Identify high spots and relic drainage.

Water levels were - 0.3 now at 1.7 m aod. Issues with idb/farmer water levels

Not ravines but topography is helpful to hold water.

Dam up ditches and include a lip. Bund of 400mm around edge.



Issues, archaeology.

Blocking up, lip.

Cutting, focus on lower ground

500mm deep scrapes, rills wide shallow batters.

Managed by budget and area available.

Priority areas. Based on historic drainage.

500mm with 10000mm batters either side.

Previously poor for water voles.

Archaeology due diligence, magnetometer survey for uxo. Practice bombing range ww1.

Foot drain in North.

Uxo was a problem. Zeteca did survey. A lot of 15lb bombs were dummies.

Uxo clearance didn't throw up any bombs.

Toolbox talk for uxo and watching brief.

Land drains. Dug out 2 M inside the ditch block up with clay.

Creates hydrological units for management.

Pump into system.

Rainfall or abstract from outside. From idb managed ditch. 194000 cubic per annum licence but using 70000 cubic.

Break into individual components can be more easily managed in drought situation.

Pipe elbow to control levels.

One abstraction point.

Topping undertaken summer and autumn. 0.75 livestock units per ha.

If dries out ineligible for env. stewardship

4 years work. Every year increased numbers.

2k per ha vs 14k per ha.



Mainly managing for breeding waders. AG

Mitigate for loss of arable land at cleve.

What are wintering bird numbers 25000 birds on site, geese ducks, waders. Pretty good. PH

EA looking to get site designated - needs wider interest.

JN fair few rare sp. Incl. Inverts shrill carder bees on high grassland - making a buzz for the coast with bbct.

Not just birds. Up to 40%/60% of ditch network has watervoles.

MA please can we have webs counts for site.

Great bells sector. Of webs.

Just Brent geese drill grass.

AG not too wet everywhere in winter.

JN no remediation for pan. More water gives more corovininid larvae.

Balance between diff aims.

MB can we use the designated land for this?

AG got to be careful from habitat regs. But the sssi bit got to hold water. JN

PH Sssi encouraging breeding waders

Sssi land not as good as it could be through lack of management. Grazing water controls. Sssi shouldn't need too much.

Employee to manage.

Budget/Cost? £330000 for capital works 550 850. Agency pay 16k per annum. Costs rspb 25 to £30000 per annum on top

2022 up for renewal.

Permanent?

Aspiration for water management to stop needing inputs

Soil type?

Off site ditches dryer? Lower levels? No abstraction balanced.



Automatic abstraction working?

Fish friendly pump

Predator control



## Meeting Note

Project: Cleve Hill Solar Park  
Type: Habitat Management Steering Group – Meeting 4  
Date: Tuesday 21 August 2018  
Time: 10:00  
Location: Cleve Hill Solar Park proposed site location  
Present: Alison Giacomelli, Natural England [AG]  
Paul Hyde, Natural England [PH]  
Greg Hitchcock, KWT [GH]  
Kevin Duvall, KWT [KD]  
Hugh Brennan, Cleve Hill Solar Park Ltd [HB]  
Simon McCarthy, Cleve Hill Solar Park Ltd [SM]  
Mark Hogan, Cleve Hill Solar Park Ltd [MH]  
Mike Armitage, Arcus Consultancy Services Ltd [MA]  
Mike Bird, Arcus Consultancy Services Ltd [MB]

### Notes:

- HMSG site visit to fields F, H, J and the HMA followed by lunch.
- Observed marked out solar PV tables the fence-line as it currently stands and the SSSI/SPA and HMA boundary.
- The increased buffers to drains were well received and the irregular areas around tables created by the non N-S alignment of the drains were observed to be relatively substantial.
- NE / KWT agreed it would be helpful to have further quantification of the size of these areas.
- Discussion regarding the fence line around the panels - currently the fence is intended to be sited near field edge, rather than wrapped around the edge of the panel arrays. This could make it difficult to manage grazing units to manage separately the grassland pockets between arrays and the grassland under/around tables. CHSPL to consider this further.
- There was also some discussion about marsh harriers - consensus that they would use the new habitat areas for foraging as long as they are not displaced entirely by the landscape scale change in habitat.
- KWT (GH) may seek advice from a marsh harrier expert with regard to wide-scale habitat use in this regard.



- The size of the HMA was discussed. CHSP agreed to issue a clear set of parameters that are considered to be the most representative of existing use for NE to comment on. General agreement on the preferred management prescription of low input organic fertilized grassland and the associated carrying capacity of this in terms of bird days.
- NE will seek further advice from Senior Ornithologist in NE regarding quantification of bird-use of the site based on the baseline data.
- KWT largely comfortable if NE are happy with the chosen metrics.
- Another meeting to be held with NE on 3 September to discuss the metrics and agree the necessary area of the HMA.





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## Meeting Notes

Project: Cleve Hill Solar Park

Type: Natural England Consultation

Date: Monday 3 September 2018

Time: 11.30am

Location: Wirsol Office, Arundel

Expected: Simon McCarthy, Cleve Hill Solar Park (SMc)  
Alison Giacomelli, Natural England (AG)  
Paul Hyde, Natural England (PH)  
Richard Saunders, Natural England (RS) [by telephone]  
Michael Armitage, Arle Ecology (MA)  
Michael Bird, Arcus Consultancy Services (MB)

MB - Introduced timescales for submission and explained intention to deal with outstanding points from s42 response.

AG – has spoken to Richard Saunders who has comments. AG awaiting notes on Monday. In summary RS happy with the bird days concept having worked closely with Arcus previously and is generally happy with what has been done. AG noted that the whole PEIR wasn't sent to RS.

MB - Noted that the note provided before the meeting is a brief summary

AG – Acknowledged this.

AG - Geese are the main thing driving the size of the HMA.

Queried no of days in season – Nov – Feb / Are the geese not there in March?

MA - 1 / 2 geese in fields in March but very few numbers. Makes little difference to the numbers but will check and confirm.

AG - When were the surveys undertaken? Advised to treat figures with caution depending on survey effort. Less survey effort would result in recommendation for more precautionary approach – i.e., leans towards use of peak-mean rather than mean.

MA - Sample size small in first season but peak numbers show whole SPA population. Samples in subsequent seasons bigger. Acknowledge that it is a sampling exercise so there is inherent uncertainty. Sample is such that the peak mean gives more comfort but not a



clear steer from NE so far.

AG - Discussion of metrics to calculate existing use is one side, the other is what the HMA can achieve. From SPA point of view, RS favours geese. Therefore the key aim of the HMA should be to provide a geese refuge and provide maximum foraging resources for geese.

AG – RS questioned the use of organic fertiliser as using inorganic fertilizer (e.g., 50 kg per ha) and 3 cuts annually was likely to provide the best habitat for geese.

PH - Didn't want water soluble fertilizer. Any impacts on water quality are important for adjacent designations.

MA – highlighted that fertilizing for geese would still likely be less than the fertiliser usage in the arable baseline.

PH - Want to provide broader benefits - inorganic not way to go but there may be a balance between inorganic/organic.

AG – view is that if the HMA can get more bird days out of the land it should and RS felt 40 ha was about right.

MB - to check fertiliser inputs and respond.

PH – We should be mindful about the other benefits the Development is seeking to achieve

MA - Adaptive management with organic and inorganic inputs – monitor use and adapt the inputs accordingly.

PH – would prefer to use less intensive method to get number of goose days as part of a long term plan to develop pasture.

If monitoring demonstrates that not possible to support the numbers of geese needed – look at adding inorganic fertilisers.

AG - RS flagged that the metrics predicted too many bird days per ha for Lapwing/GP. References had been multiplied up but RS felt that shouldn't be done.

LW/GP use of mixed arable based on "best" areas but depends on availability

Dense sward for geese makes achieving the best conditions for lapwing and golden plover more challenging.

AG- RS also discussed the need to understand more detail on the survey effort, e.g., were zeros actually zeros or no data? Is the data representative?

MA – yes to both of those points. [post-meeting note – some zeros in the data tables are no counts; these are principally intertidal count sectors that weren't covered by some of the farmland surveys from within the sea wall. However, they do not affect the metrics for the



arable land within the site]

MA - to look into extending the carrying capacity of HMA over 6 months and using the data over that period [post-meeting note – extending quantification for geese over October and March resulted in a false (albeit marginal) increase in measured use of the arable land in the site; because there are no counts in October of Season 1 and no counts in March of Season 2, whilst all other counts in October and March of other seasons are zero. That results in the average count from core Nov-Feb months being applied to Oct/Mar, when zeros would be expected]

PH - Fertiliser inputs likely to be higher currently than under HMA management

SMcC - What are the input limits under a stewardship agreement

PH – depends on the stewardship options

MA - asked what RS's advice is on lapwing and golden plover?

AG - suggested looking at stewardship standard GS10 (management of wet grassland for wintering waders/wildfowl) on the gov.uk site; 3 points which refer to unsuitability, including >50kg/ha fertiliser.

RS dialled in.

MA asked RS to confirm his view that Geese most important & HMA delivery should focus on geese requirement

RS highlighted that dark bellied brent geese are more constrained around the SPA, whilst lapwing and golden plover fly further (20km) so less constrained, with more capacity to accommodate them available in the wider countryside - farmland across north Kent.

MA - Key questions are how many bird days are supported by the mitigation land, and how many bird days are lost?

MA - counts are variable etc – is the peak mean or mean approach more valid?

RS – highlighted that comments based on high level review of a single pdf document but that he is familiar with Arcus and the bird-days concept from previous sites. There are no guidelines and the mitigation is a little experimental – not clear cut. The NE position is based on the request for DAS advice & common sense.

RS – the overall approach Arcus have taken is precautionary which NE like. The area proposed seems about right to accommodate 100% of the foraging resource

RS - Worried about precedent in respect of the particular combination of golden plover, lapwing and geese. For brent geese we have good evidence and we know how many geese can be supported by particular areas of land – in the region of 2,250 bird days per ha.



MA - Season length produces similar results, restructuring numbers to Oct-Mar (rather than Nov-Feb) doesn't make much difference.

RS – geese feed on overwintering stubbles – Spilt grain. Perhaps in springs if cereal growth delayed it reduces usage.

The surveys cover periods so zero figures for Oct & Mar can be used which supports a smaller area. [see post-meeting note above]

RS – key to check that surveys haven't missed any important peaks in October and March – definitely zeros?

MA – reasonable sample, not likely to have entirely missed higher peaks in October and March – all counts are Zeros / 1's 2's in October and March.

In March - thorough growth meant they feed elsewhere.

AG asked RS - How many bird days can mitigation area support?

RS - 3 cuts & 50kg inorganic fertiliser gives 2,097 bird-days/ha

Max goose compromises lapwing/golden plover

Lapwing / golden plover numbers – bird days based on 2 papers. (incl. Gillings) Prioritises arable /over pasture so the usage is potentially not as good as expected.

Bird days based on best area in mixed arable.

Combining lapwing / golden plover days using the bird days approach and the birds using the same areas is potentially flawed.

RS – evidence has been interpreted differently - 7800 bird days too high. NE don't necessarily think that the same bird usage can be achieved in the same area.

MA – will check the Gillings papers and others and update the position on the relevance of the paper to the HMA here.

RS set out that the HMA area based on the metrics provided would lead to concerns due to the degree to which the high numbers of bird days expected to be supported (the high carrying capacity predicted).

RS asked - to what degree were GP/LW using same areas?

Likely to be some overlap but not complete. X3 multipliers unlikely to work in goose mitigation area

RS – calcs predict 10,000 bird days/ha across HMA. Overlap is important



Could keep 3000 bird days for plover but considered the overlap in more detail.

MA – we understand golden plover and lapwing use can overlap. Also with geese. This is not necessarily simultaneous use – geese and GP/L are not in the same fields at same time.

MA - With 2000 bird days/ha for geese. What GP/LW can be supported? 1000 days plover / 1000 lapwing?

MA – Gillings paper was mixed arable not pasture

RS – hypothesise that plover are moving to arable though broader land use change which was generally agreed.

[post-meeting note – analysis has been updated to consider capacity of the grassland to be the same as Gillings found in mixed arable: combined 1000 lapwing-days and 1560 GP-days per hectare across winter]

MB – asked as the mean/peak mean metric influenced the numbers to a large extent, what the approach should be.

RS - Peak mean/mean – need to be clear about what the method is. Use appropriate terminology and explain what the monthly peak mean is in this context to avoid confusions with other types of peak count.

RS – Use of peak or mean depends on nature of counts, length of surveys/coverage etc. More supports a mean approach, less a peak mean approach. Peak is generally preferred as precautionary.

MA commented on survey effort and explained the rationale for surveys.

Counts per field

At least 2 counts per month in first winter or 3-4 at least in latter 2 winters

15% of available days captured in survey data in latter seasons.

The survey coverage is likely to support a more peak mean approach

RS – recommend that MA find a bird days fig. for pasture for lapwing / golden plover per ha

Prob. more peak mean if can't find more pasture evidence for the carrying capacity.

RS to provide comments to AG/PH

MA to revise calculations taking account of revised capacity values

NE and other stakeholders to review the GS10 management prescription.



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Max goose scenario to be understood but less desirable

RS – suggest prioritise brent geese

MA - Feeding vs roosting is important

AG - Update the data splitting out roosting and feeding.

SMcC – what happens if we calculate the numbers and we need more land – what do we do  
– Field A? Extend the HMA?

AG - Would geese use Field A?

PH - Yes- Surrounded by SSSI/SPA etc.

SMcC – if the numbers worked on west half of field A would that work or would there be another preferred area?

PH - Prefer to expand into adj. field - J or H?

MB - Field A has pylons running along the south – would this affect anything?

PH – it probably wouldn't need to be buffered for disturbance.

PH/ AG – An extension to the existing HMA would likely be preferred as the surveys demonstrate existing use

RS – comfortable with situation for marsh harrier – use of land between and around arrays likely. Effects likely to be benign at worst.

AG – Need to move fence line to allow separate grazing management of parcels of grassland for marsh harriers between panels.

MB/AG – consideration of SoCG:



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