

From: [REDACTED]
To: [REDACTED]
Subject: RE: Cleve Hill Solar Park - Additional Submission, Statement of Common Ground between the Applicant and Natural England
Date: 11 November 2019 17:52:48
Attachments: [REDACTED]

Dear Hefin,

Further to Mike's email below, it is also worth drawing to the ExA's attention please that the content of this SoCG with Natural England addresses many of the Rule 17 questions. Our responses to those will follow by DL7 and cross-refer to this SoCG.

Kind regards,

Gareth Phillips
Partner
for Pinsent Masons LLP

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From: Mike Bird [REDACTED]
Sent: 11 November 2019 17:48
To: Jones, Hefin
Cc: Cleve Hill Solar Park; Hall, Paige; [REDACTED]; [REDACTED]
Subject: [EXTERNAL] Cleve Hill Solar Park - Additional Submission, Statement of Common Ground between the Applicant and Natural England

Dear Hefin,

Cleve Hill Solar Park - Additional Submission, Statement of Common Ground between the Applicant and Natural England

Please find attached an agreed, signed Statement of Common Ground between the Applicant and Natural England.

This SoCG supersedes the previous version of the post-submission SoCG with Natural England submitted at Deadline 4 [REP4-039] and is hence referenced as Revision B.

If there are any queries in respect of this submission please do not hesitate to get in touch.

Kind regards,

Mike

Michael Bird



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CLEVE HILL SOLAR PARK

STATEMENT OF COMMON GROUND BETWEEN THE APPLICANT AND NATURAL ENGLAND (POST-SUBMISSION)

November 2019
Revision B

Document Reference: N/A
Submitted: Additional Submission

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DCO APPLICATION REFERENCE EN010085

**STATEMENT OF COMMON GROUND (SOCG) –
Post-submission**

NOVEMBER 2019

BETWEEN:

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

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1 INTRODUCTION


1.1 Summary and Overview

1. This Statement of Common Ground (SOCG) has been prepared in relation to an application (the Application) 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). The application was accepted on 14th December 2018.
2. This SoCG has been prepared as a means of clearly stating any areas of agreement and disagreement between the Applicant and Natural England (NE), which are set out in sections 3, 4, 5 and 6. Each section addresses points raised in key submissions by Natural England during the examination as follows:
 - The Planning Inspectorate Rule 6 Letter, Annex E, SoCG Inclusions
 - Relevant Representation Comments [RR-826]
 - Written Representation Comments [REP2-096]
 - Written Summary of Oral Submission [REP5-050]
3. The points of agreement in the pre-submission SoCG between the Applicant and Natural England [APP-256] are not reproduced in this post-submission SoCG.
4. A draft, unsigned SoCG was submitted to the Examination at Deadline 4 [REP4-039] on 30 August 2019. This SoCG supersedes that SoCG.

2 AGREEMENT

5. Confirmation that Table 2, Table 3, Table 4 and Table 5 of this SoCG reflect the points of agreement at the stated date is provided in Table 1.

Table 1: Confirmation of Agreement

Date	Signatory	Signature
<i>11 November 2019</i>	<i>Patrick McKernan, Manager, Sussex and Kent Area Team, Natural England</i>	

3 THE PLANNING INSPECTORATE RULE 6 LETTER ANNEX E SOCG INCLUSIONS

6. The Planning Inspectorate provided an Initial Assessment of Principal Issues as set out in Annex B of the Rule 6 Letter dated 18 April 2019. In relation to those Principal Issues, the Examining Authority (ExA) set out a number of recommended inclusions for the SoCG with Natural England with regards to biodiversity and nature conservation (including Habitats Regulations Assessment). Table 2 lists out the areas for inclusion. The issues raised in the Rule 6 Letter are addressed in the pre-submission SoCG [APP-256] and Sections 4 to 6 of this SoCG.

Table 2: SOCG Areas for Inclusion

Area for Inclusion	Applicant Comments	NE comments
Survey areas, assessment of baseline data and data collection methodologies.	The data analysis and presentation of results are set out fully in Appendix A9.1 [APP-223]. It was agreed in the pre-submission SOCG with Natural England [APP-256] that the survey coverage and methodology of baseline surveys completed are sufficient to enable a thorough assessment of potential effects on SPA/Ramsar birds.	Agreed. No further comments.
Analysis of data and the presentation of results, including the use of expert judgements and assumptions.	The data analysis and presentation of results are set out fully in Appendix A9.1[APP-223]. It was agreed in the pre-submission SOCG with Natural England [APP-256] that the bird-days metric using 'peak-mean' counts was appropriate to measure and mitigate for use of arable land by brent goose, lapwing and golden plover.	Agreed that bird-days metric used is appropriate.
Methodology for Environmental Impact Assessment and Habitats Regulations Assessment, including assessment of cumulative and in-combination effects.	The methodologies for EIA and HRA, including cumulative and in-combination effects are set out in Section 9.2.5 of Chapter 9: Ornithology of the ES [APP-039] and in the RIAA [APP-026]. This SOCG refers to the ES chapter and RIAA as necessary in relation to these issues.	Agreed that methodologies for undertaking EIA and HRA are appropriate.
Likely effects on any protected species and on special interest features of sites designated or notified for nature conservation purpose.	The likely effects on special interest features of sites designated or notified for nature conservation purpose are assessed in Section 9.5 of Chapter 9: Ornithology of the ES [APP-039] and in the RIAA	Agreed.

Area for Inclusion	Applicant Comments	NE comments
	<p>[APP-026], and associated Screening and Integrity Matrices updated at Deadline 3 [REP3-023].</p> <p>This SOCG refers to the above documents as necessary in relation to these issues.</p>	
<p>Mitigation and enhancement measures, including likely effectiveness, monitoring procedures and method for securing such measures within the DCO.</p>	<p>The mitigation and enhancement measures are described in the species assessment accounts in Section 9.5 of Chapter 9: Ornithology of the ES [APP-039] and in the RIAA [APP-026]. The detailed prescriptions are set out in the outline Construction Environmental Management Plan (CEMP) [REP6-007], Breeding Bird Protection Plan (BBPP, Appendix B of the outline CEMP), outline SPA Construction Noise Mitigation Plan (SPA CNMP) and Outline Landscape and Biodiversity Management Plan (LBMP) [REP6-005].</p> <p>This SOCG refers to the above documents as necessary in relation to these issues.</p>	<p>Agreed.</p>
<p>DCO drafting.</p>	<p>The draft DCO [REP6-003] includes the following relevant Requirements:</p> <ul style="list-style-type: none"> 5 – Landscape and Biodiversity Management Plan (LBMP) 11 – Construction Environmental Management Plan (CEMP) 13 – Special Protection Area Construction Noise Management Plan (SPA CNMP) 14 – European Protected Species <p>This SOCG refers to the above requirements as necessary.</p>	<p>Agreed.</p>

4 RELEVANT REPRESENTATION COMMENTS [RR-826]

Table 3: Relevant Representation Comments

Natural England Comments	Applicant Comments	Status (NE to complete/update)
<i>Relevant Representation Comments</i>	<i>Applicant's response</i>	<i>E.g., Agreed / Not Agreed / N/A</i>
<p>The natural features potentially affected by this application: The designated sites relevant to this application are: 2.1.1. The Swale Special Protection Area (SPA); 2.1.2. The Swale Wetland of International Importance under the Ramsar Convention (Ramsar site) 2.1.3. The Swale Site of Special Scientific Interest (SSSI) Natural England is satisfied that all other statutorily designated nature conservation sites can be screened out as not being significantly affected by the proposal.</p>	<p>The Applicant agrees and notes that this summary concurs with the conclusions of the RIAA [APP-026].</p>	<p>Agreed</p>
<p>The Swale SPA is designated for its populations of wintering dunlin and dark-bellied brent geese (hereafter brent geese), its assemblage of wintering waterbirds, and its assemblage of breeding birds of damp grassland. Natural England has advised the applicant as to the species that are included in the assemblages. This advice is set out at section 5.2.4 of the Report to Inform an Appropriate Assessment (RIAA). We can confirm that these are the species that need to be assessed under the Habitats Regulations. Where there is a discrepancy between the species on the Standard Data Forms on the JNCC website, the species listed on the Conservation Objectives are the legally correct ones to assess, as these are derived from the</p>	<p>The qualifying interest species of The Swale SPA that are relevant to the HRA are agreed.</p> <p>It is agreed that the RIAA [APP-026] considers the correct SPA features and acknowledges the clarification regarding the discrepancy in qualifying interest species on the Standard Data Form and in the Conservation Objectives.</p>	<p>Agreed</p> <p>Agreed</p>

Natural England Comments	Applicant Comments	Status (NE to complete/update)
<p>citation, whereas the Standard Data Forms list the species that were present in qualifying numbers when the Form was generated.</p>		
<p>The Swale Ramsar site is designated for its communities of wetland plants and invertebrates, its assemblage of wintering waterbirds, and a number of bird species occurring at levels of international importance (these are listed at section 5.2.3 of the RIAA). Natural England can confirm that these are the correct Ramsar features.</p>	<p>It is agreed that the RIAA [APP-026] considers the correct Ramsar features.</p>	<p>Agreed</p>
<p>The following European/Nationally protected species may be affected by the proposed project: great crested newts and water voles.</p>	<p>This is agreed by the Applicant.</p>	<p>Agreed</p>
<p>The main issues raised by this application, in terms of impacts on statutorily designated nature conservation sites, are noise and visual disturbance, production of dust, and hydrological impacts during construction and/or decommissioning; and loss of functionally linked habitat during operation. Natural England's advice regarding these potential impacts is set out in section 3, below. Natural England agrees with the conclusion of table 3 in the RIAA, that all other potential impacts would not be likely to have a significant effect.</p>	<p>This is agreed and concurs with the assessment set out in the RIAA [APP-026].</p>	<p>Agreed</p>

Natural England Comments	Applicant Comments	Status (NE to complete/update)
<p>As noted in our response to the Preliminary Environmental Information Report (PEIR), Natural England does not advocate the use of noise thresholds as the impact of a particular noise stimulus on a bird population is site and species specific. Therefore, it is difficult to say with certainty, that below a certain threshold, disturbance to a particular bird species will not occur. Nevertheless, we accept that the use of noise levels can be helpful in understanding the area that will be potentially affected, and hence help devise mitigation measures.</p>	<p>The Applicant amended the assessment of noise disturbance in response to Natural England's comments on the PEIR in this regard.</p> <p>Section 9.5.2.1 of Chapter 9: Ornithology of the ES [APP-039]. and Section 6.1.1 of the RIAA [APP-026] describe the rationale for setting precautionary thresholds of noise levels for the assessment of effects on breeding and wintering birds. These were based on the available literature and had consideration of the site-specific baseline ambient environment. The assessment of effects in Section 9.5.3 of Chapter 9: Ornithology of the ES [APP-039] also makes use of the reviewed literature to take account of species-specific sensitivities to noise and visual disturbance. These noise thresholds were used to guide the outline SPA Construction Noise Management Plan updated at Deadline 3 [REP3-008]. An ECoW will be deployed during the construction phase to observe bird responses and inform further action in order to prevent significant disturbance.</p> <p>The Applicant seeks agreement from Natural England that the outline mitigation proposed provides suitable mechanisms to avoid significant disturbance to breeding and wintering birds in the SPA.</p>	<p>The approach taken to the assessment is agreed.</p> <p>NE is satisfied that the updated SPA Construction Noise Management Plan [REP3-008] contains sufficient mitigation measures, secured through the dDCO. Therefore, NE can advise that when a formal appropriate assessment is undertaken, the evidence before the Secretary of State is sufficient to support a conclusion of no adverse effect on the integrity of the SPA.</p>

Natural England Comments	Applicant Comments	Status (NE to complete/update)
<p>Figure 3 in the RIAA shows that the 70dB_Lmax noise contour does not reach the intertidal area. However, the 55dB_Lmax contour extends 320m from the source of the piling, and hence extends into the intertidal. Therefore, there is the potential for wintering birds to be impacted. Natural England recognises that only a relatively small proportion of the SPA is affected (paragraph 134 of the RIAA states that 10.6ha of intertidal habitat will be affected when the piling occurs closest to the SPA), and our view is that at low tide this is unlikely to result in an adverse impact. However, the birds of the SPA are more susceptible to disturbance at high tide when they are roosting, as they are confined to smaller areas closer to the source of disturbance and have fewer alternative sites. Therefore, whilst we welcome the mitigation measures set out in the Outline SPA Construction Noise Management Plan (CNMP), we would like to explore whether timing the piling work closest to the SPA, and in particular, close to Castle Coote, outside of high tide, would be possible.</p>	<p>The Applicant will continue to work with Natural England and the Habitat Management Steering Group (HMSG) to reach a satisfactory and workable construction plan to minimise disturbance to roosting birds in the SPA.</p> <p>The outline SPA CNMP [REP3-008] states that the noise levels will be reassessed when plant and manufacturer data become available to ensure that the mitigation mitigates significantly disturbing activity. At such time, additional protections may be included in the SPA CNMP to minimise the risk of significant disturbance to roosting birds in the SPA. Discussions with the HMSG to date have included suggestions such as timing piling works in areas closest to roost sites at Castle Coote during September/October to avoid the core winter season when birds might be more sensitive to disturbing effects, as well as avoiding disturbance within the SPA during the breeding season. Such areas can be defined as the SPA CNMP evolves once more certain data on noise emissions of plant becomes available.</p> <p>The Applicant seeks agreement from Natural England that this approach provides suitable mechanisms to avoid significant disturbance to roosting birds in the SPA.</p>	<p>NE welcomes the inclusion of specific measures in the updated SPA CNMP [REP3-008] to avoid disturbance to wintering birds using Castle Coote, and breeding birds within the SPA. In particular, Appendix 3 showing indicative setback distances, is helpful. We agree that the SPA CNMP contains a sufficient suite of mitigation measures secured in the dDCO,. Therefore, NE can advise that when a formal appropriate assessment is undertaken, the evidence before the Secretary of State is sufficient to support a conclusion of no adverse effect on the integrity of the SPA.</p>

Natural England Comments	Applicant Comments	Status (NE to complete/update)
<p>The grazing marsh and reedbed to the north and west of the solar farm site supports breeding birds which form components of the breeding bird assemblage of the SPA (and SSSI notified features, including bearded tit). These birds are susceptible to disturbance, which may affect their productivity, so mitigation measures are necessary.</p> <p>Paragraph 148 of the RIAA states that construction activities resulting in noise over 65dBLAmax will be avoided in the breeding season (1 March to 31 August inclusive). Whilst we welcome the commitment to avoid disturbance in the breeding season, we question the use of this threshold and whether it provides sufficient certainty over the absence of potential impacts. Natural England will work with the applicant on this point and provide further advice during the examination. Greater clarity is also needed regarding the scheduling for construction, and whether this will enable the threshold mitigation measure to be complied with. This is because the Breeding Bird Protection Plan (Appendix B of the Outline Construction Environment Management Plan (CEMP)) states that 'where practicable' construction activities closest to The Swale will be avoided (paragraph 158), which does not give sufficient certainty.</p>	<p>The Applicant will continue to work with Natural England and HMSG to reach a satisfactory and workable construction plan to minimise disturbance to breeding birds in the SPA and SSSI.</p> <p>Section 9.5.2.1 of Chapter 9: Ornithology of the ES [APP-039] and Section 6.1.1 of the RIAA [APP-026] describe the rationale for setting precautionary thresholds of noise levels for the assessment of effects on birds. These were based on the available literature and the Applicant gave due consideration of the site-specific baseline ambient environment. Based on the assessment of effects, an outline SPA Construction Noise Mitigation Plan (SPA CNMP) [REP3-008] has been developed together with the Breeding Bird Protection Plan (BBPP, Appendix B of the outline CEMP [REP6-007]) to minimise the risk of significant disturbance to birds.</p> <p>In paragraph 158 of the BBPP in the outline CEMP, the term 'where practicable' was intended so as not to restrict <u>all</u> construction activities in areas closest to the SPA boundary during the breeding season. It is necessary to permit activities that do not cause noise emissions exceeding the threshold described in the assessment – such activities may be required for the efficient execution of the development's construction and would be no more disturbing to breeding birds than the typical baseline farming operations. Section 6 of the outline SPA CNMP describes the measures, including implementation of appropriate setback distances for piling and other noisy construction</p>	<p>NE agrees that the mitigation measures set out in the updated SPA CNMP [REP3-008] and within the updated Breeding Bird Protection Plan at Appendix B of the CEMP [REP6-007] are sufficient such that NE can advise that when a formal appropriate assessment is undertaken, the evidence before the Secretary of State is sufficient to support a conclusion of no adverse effect on the integrity of the SPA.</p>

Natural England Comments	Applicant Comments	Status (NE to complete/update)
	<p>activities activities, to be implemented to ensure that the noise levels at the SPA boundary will not exceed 65 dB L_{Amax} during the breeding season. The wording of the BBPP in the outline CEMP will be reviewed and discussed with Natural England to provide greater clarity and certainty in this respect.</p> <p>An ECoW will also be deployed during the construction phase to observe bird responses and inform further action in order to prevent significant disturbance. The BBPP applies additional protective measures for marsh harrier, which is considered to be the species likely to be most sensitive to disturbance.</p> <p>The Applicant seeks agreement from Natural England that this approach provides appropriate mechanisms and certainty to avoid significant disturbance to breeding birds in the SPA.</p>	
<p>Natural England is satisfied that the construction traffic using the site access road adjacent to the SPA grazing marsh to the east of the development site will not cause significant disturbance to the birds using that part of the SPA in the breeding or wintering seasons.</p>	<p>This is agreed.</p>	<p>Agreed.</p>

Natural England Comments	Applicant Comments	Status (NE to complete/update)
<p>Surveys undertaken in support of the proposal indicate that large numbers of brent geese, lapwings and golden plovers use the arable land within the development site in the winter. Brent geese are named on The Swale SPA citation, and lapwings and golden plovers are main components of the wintering bird assemblage. Natural England agrees with the statement (in paragraph 163 of the RIAA) that these species will not be adversely impacted in the first winter of construction as there will be sufficient undeveloped area for them to continue to forage. However, there will be an impact in the second (and third) winter as the Arable Reversion Habitat Management Area (AR HMA) will be subject to construction disturbance. As this disturbance is temporary, we agree that it is not likely to lead to an adverse effect on wintering geese and plovers.</p>	<p>This is agreed.</p>	<p>Agreed.</p>
<p>Natural England's view is that standard construction mitigation measures, as set out in the Outline CEMP, are sufficient to address potential dust emissions, and risks to water quality from the operation of plant and vehicles.</p>	<p>This is agreed.</p>	<p>Agreed.</p>
<p>The ES (for example at paragraph 169 of the Ornithology Chapter) states that the cessation of pesticide, fertiliser and herbicide use currently associated with the arable management of the land, will be a benefit. In order to assess the level of benefit to the Ramsar ditch plant and invertebrate communities, it would be helpful to understand the level of application that is currently employed.</p>	<p>This was investigated by the Applicant but excluded from the ornithological assessment in Chapter 9: Ornithology of the ES [APP-039] and the RIAA [APP-026], because specific values of pesticide, fertiliser and herbicide application for each field (nor the CHSP area) in each season were unavailable; values for fertiliser application were only available at a farm scale at the time of submission.</p> <p>Further details of baseline fertiliser application was provided at Deadline 4 [REP4-050] and Natural England confirmed in its written summary of oral submission at Deadline 5 [REP5-050] that:</p>	<p>Agreed.</p>

Natural England Comments	Applicant Comments	Status (NE to complete/update)
	<p>"Natural England is satisfied that the fertiliser application rates over the whole solar farm site will be lower than in the current situation, as evidenced by [REP4-050]. There will therefore be lower nutrient inputs to the ditches if the solar farm is built, which will be a benefit to the Ramsar ditch features over the current situation. This resolves the issue Natural England raised in paragraph 3.3.2 of our Written Representation [REP2-096]"</p>	
<p>Fertiliser (farmyard manure) is proposed to be applied to the AR HMA at a rate of 50 kgN/ha (however we recommend this is expressed in terms of 12 tonnes/ha/year, rather than in terms of inorganic fertiliser, as this would be the level of fertiliser use permitted in the low input grassland agri-environment scheme option). This is necessary to maximise the production of grass as food for the displaced brent geese (see below). This should not be applied close to the ditches, to minimise run-off into the watercourses. Natural England will provide advice, through the Habitat Management Steering Group, on appropriate application of fertiliser. However, in order to understand the impact of this fertiliser application on the Ramsar ditch communities, it would be helpful for the applicant to confirm whether this is more or less N than is currently applied.</p>	<p>As stated above, this was investigated by the Applicant but excluded from the ornithological assessment in Chapter 9: Ornithology of the ES [APP-039] and the RIAA [APP-026], because specific values of pesticide, fertiliser and herbicide application for each field (nor the CHSP area as a whole) in each season were unavailable; values for fertiliser application were only available at a whole farm scale and it was not clear if those values were applicable annually.</p> <p>The amount of fertiliser applied will be much less in quantity than in the current baseline and will only be applied during the Development in the area of the AR HMA, compared with baseline application across the whole farmed site.</p> <p>Further details of baseline fertiliser application have been obtained and will be analysed to</p>	<p>NE accepts that the amount of fertiliser applied to the AR HMA is likely to be less than currently applied to that area.</p> <p>It is agreed that fertiliser application will be less than currently applied at the application site scale.</p>

Natural England Comments	Applicant Comments	Status (NE to complete/update)
	<p>compare with the future proposed fertiliser application in the AR HMA during the Development</p> <p>The precise details of fertiliser application in the AR HMA will be developed as the project progresses and the 'live' LBMP [REP6-005] will be updated accordingly. It is anticipated that spreading of organic fertiliser will be restricted beyond 10 m of wet field boundaries, in line with government guidance.</p>	
<p>As noted above, the development site supports significant numbers of brent geese, golden plovers and lapwings in the winter. The Ornithology Technical Appendix shows that numbers fluctuate according to the type of crop planted and other factors, including time of year. However, at times the number of birds on site is large, and a significant proportion of the respective SPA populations. The applicant's surveys, and data from the Kent Wildlife Trust (Table A9.6 of the Ornithology Technical Appendix), demonstrate that the development site is regularly used by wintering geese and plovers, and hence is functionally linked to the SPA/Ramsar. Natural England's view is that, in order to avoid an adverse effect on integrity, there should be no net loss of foraging resource as a result of the proposal. This has, therefore, been the prime focus of our discussions with the applicant to date.</p>	<p>This is agreed.</p>	<p>NE welcomes the agreement that there should be no net loss of foraging resources as a result of the proposal.</p>
<p>As noted in Natural England's response to the PEIR, JNCC's 3rd SPA Review2 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 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</p>	<p>This is agreed. The Applicant welcomes the clarification regarding the legal document against which the proposal should be assessed, which concurs with the assessment presented in section 5.2.1 of the RIAA [APP-026].</p>	<p>Agreed.</p>

Natural England Comments	Applicant Comments	Status (NE to complete/update)
<p>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. Natural England's view is that to avoid an impact on The Swale, the function of the supporting habitat must be maintained.</p>		
<p>As described in the Ornithology Technical Appendix, the applicant has used a 'bird-days' metric to assess the current use of the arable habitat, and compare this to the number of bird days that could be supported by the AR HMA. Natural England has provided advice to the applicant on the development of the metric, and our view is that this is an appropriate way of assessing losses and gains in habitat.</p>	<p>This is agreed.</p>	<p>Agreed that the use of the bird days metric is appropriate, though NE has been working with the applicant to resolve some uncertainties around its application in relation to lapwings and golden plovers – see below.</p>
<p>Paragraph 109 of the Ornithology Technical Appendix sets out the cropping regime for the development site over the last 10 seasons. This shows that at least 40% of the development site was planted with winter cereals (ie providing good foraging habitat for brent geese) in 7 out of 10 seasons. In the years that the bird surveys for the application were carried out, the development site was planted with at least 40% winter cereals in 3 out of 4 years. Therefore, Natural England is satisfied that the surveys were undertaken during a representative part of the crop rotation, and hence that the inter-annual mean of the intra-annual mean of the peak monthly counts (as described at paragraph 104 of the Ornithology Technical Appendix) is an appropriate way to calculate bird days.</p>	<p>This is agreed.</p>	<p>Agreed.</p>
<p>Natural England has advised the applicant that the AR HMA should maximise its production of grass for brent geese. This is because geese are more site faithful and have a shorter foraging distance than lapwings or golden plovers. Experimental manipulation of management prescriptions for brent geese and accurate survey has shown that grass cut five times and fertilised with 50kgN/ha can</p>	<p>It is agreed that the AR HMA is primarily designed to mitigate for loss of foraging resources in the site's arable land for brent geese. Compared with the baseline of arable cropping and application of fertilisers, herbicides and pesticides, the AR HMA would not be expected to compromise other ecological interests.</p>	<p>Agreed. [REP4-050] demonstrates that fertiliser application in the AR HMA will be less than currently applied, and the LBMP [REP6-005] states that a</p>

Natural England Comments	Applicant Comments	Status (NE to complete/update)
<p>support 2097 goose-days/ha. Therefore, we can have confidence in the predicted number of goose-days for the AR HMA, if this management regime is followed. However, Natural England would welcome further discussion with the applicant, through the Habitat Management Steering Group, as to whether the management for geese, and in particular the fertiliser application, would compromise any other ecological interests.</p>		<p>buffer on unfertilised land will be left along the ditches, which ensures the ecological interest of the ditches will not be compromised.</p>
<p>Paragraph 195 of the RIAA states that based on 2097 goose-days/ha, then 48.6ha of mitigation land is required. Taking account of a 50m buffer along the edge of the solar park, the AR HMA would provide 50.1ha of habitat available to geese. Provided that 2097 goose days/ha can be achieved without affecting other ecological interests, Natural England is satisfied that the AR HMA is large enough to avoid an adverse effect on foraging brent geese.</p>	<p>This is agreed.</p>	<p>Agreed</p>
<p>Lapwings and golden plovers feed on soil and surface invertebrates. Therefore, they do not compete for the same food as brent geese and can potentially be accommodated on the same piece of mitigation land. The bird-days calculations for these species (described at paragraph 131 of the Ornithology Technical Appendix) indicate that 56ha of mitigation land is required for lapwings and 18.5ha for golden plovers, ie there is a small shortfall for lapwings, but over-provision for golden plovers.</p>	<p>This is agreed.</p>	<p>Agreed</p>
<p>However, there are a number of uncertainties around the bird-days calculations for these species.</p> <ul style="list-style-type: none"> • The bird days are based on work in arable habitats so it is not clear that grassland will provide the same capacity; • Established grassland can have a greater earthworm biomass than arable (though the applicant has followed Natural England's advice in not using a multiplier to increase the number of bird days). • If the AR HMA is managed to produce a dense sward for brent geese, it is not clear that the soil invertebrates would be easily available to lapwings and golden plover, even if there was a higher 	<p>The literature review described in Section 9.6.2.2 of Appendix A9.1 [APP-223] suggested that permanent grassland will have higher capacity for these species than arable farmland; hence in the PEIR, the ability of the AR HMA to host lapwing and golden plover was calculated on higher capacity factors. However, following advice received in response to PEIR to follow a more precautionary approach, the capacity factors were reduced for the assessment in the ES chapter [APP-039] and RIAA [APP-026] to be the</p>	<p>This issue was discussed at the HMSG meeting on 23 August 19. NE's view is that whilst lapwings and golden plovers do feed on grassland, and pasture can support more invertebrates, these waders do seem to favour arable</p>

Natural England Comments	Applicant Comments	Status (NE to complete/update)
<p>biomass in the soil. Notwithstanding these uncertainties, the applicant suggests that the shortfall in lapwing capacity can be made up by the over provision for golden plovers, as the two species feed in the same areas, and the mitigation requirements are not additive. Natural England has not been able to provide a specialist review of the metric calculation and conclusions for lapwings and golden plovers, but will work with the applicant to resolve these uncertainties and provide further advice as the Examination progresses.</p>	<p>same as those for arable cereal crops (described at paragraph 131 in Section 9.6.2.2 of Appendix A9.1).</p> <p>Sward density is typically naturally higher in permanent grassland than arable cereal crops, by virtue of its permanence. However, the evidence from the literature (described in Section 9.6.2.2 of Appendix A9.1 suggests that permanent grassland will have a higher capacity to host lapwing and golden plover than arable cereal crops, indicating that the denser sward of grassland does not compromise the availability of invertebrates to these species.</p> <p>The Applicant's final position is that the updates to the LBMP [REP6-005] as well as the further advice from Dr Gillings [AS-040] resolve all outstanding uncertainty in respect of these species.</p>	<p>land, at least at certain times.</p> <p>The HMSG agreed that waders could be attracted in by the creation of a scrape on the adjacent SSSI, which would increase the likelihood that they forage within the AR HMA.</p> <p>Appendix K of the Outline LBMP submitted at Deadline 6 [REP6-005] sets out the prescriptions for the management of the adjacent SSSI which Natural England is supportive of. With this addition, Natural England is now content that the management of the AR HMA and other areas of the site is secured in the Outline LBMP, addressing the outstanding uncertainty in respect of golden plover and lapwing.</p>
<p>The flight activity surveys undertaken in support of the application show that the ditches within the development site are regularly used by foraging marsh harriers. Since the PEIR consultation, the applicant has increased the set back distance of the solar arrays from the ditches from a minimum of 5m to a minimum of 15m. Natural England's view is that this is an improvement as it reduces the risk that 'pinch points' along the ditches would pose a barrier to foraging</p>	<p>Natural England's view that an increase in offset between the ditches to the solar arrays is an improvement, is noted by the Applicant.</p> <p>The Outline LBMP submitted at Deadline 6 [REP6-005] sets out the management prescriptions for the grassland between the solar</p>	<p>Agreed</p>

Natural England Comments	Applicant Comments	Status (NE to complete/update)
marsh harriers. Natural England recommends the grassland between the ditch and solar array is managed to maximise the habitat for terrestrial small mammals to encourage plentiful prey for the harriers	panel arrays in each field, which are designed to provide good conditions for prey animals including invertebrates, small mammals and birds.	
Natural England notes the representations made by the Environment Agency regarding the impact of the proposal on the Medway Estuary and Swale Coastal Flood and Erosion Strategy (MEASS). The Habitats Regulations Assessment for MEASS requires that intertidal habitat is created to compensate for losses due to sea level rise and coastal squeeze. Therefore, it is imperative that the Cleve Hill site is available for managed realignment in the future. Natural England, therefore, supports the Environment Agency's recommendation of a time limit on the proposal.	The Applicant expects the Development to operate for a finite period, anticipated to be 40 years. Whilst the DCO is not time limited, the Applicant would accept a suitably worded DCO requirement which would result in the end of the operational phase of the Development after 40 years of operation subject to the EA (or equivalent body at the time) demonstrating that the MR proposals can be delivered on the Cleve Hill site.	Agreed
Natural England's view is that the mitigation measures set out in section 3, above, are sufficient to address potential impacts on the notified features of The Swale SSSI.	This is agreed.	Agreed
The development site supports populations of great crested newts and water voles. The applicant will need a licence from Natural England for works that will affect these species. We are working with the applicant on the requirements for this. Once the applicant has drafted a licence application, Natural England will supply a Letter of No Impediment.	The Applicant has engaged with Natural England through the Protected Species Service (PSS) to obtain the LoNI. Draft Licence documentation has been submitted to Natural England in respect of great crested newts and water vole.	Agreed and LoNIs issued.

Natural England Comments	Applicant Comments	Status (NE to complete/update)
<p>The potential impacts of the proposal on views from the Kent Downs Area of Outstanding Natural Beauty (AONB) has been assessed in Chapter 7 of the ES. Viewpoint 20, at Shepherd's Hill in the AONB, is around 7.6km from the development site, and as such there are only distant views of the site. Therefore, Natural England concurs with the assessment (at paragraph 414) that the proposal would result in moderate/minor effects on the AONB which are not significant.</p>	<p>This is agreed.</p>	<p>Agreed.</p>
<p>Natural England has a duty to provide coastal access on foot around the whole of the English coast and is aiming to complete this by 2020. This is a new National Trail with an associated margin of land predominantly seawards of this, for the public to access and enjoy. Natural England takes great care in considering the interests of both land owners/occupiers and users of the England Coast Path, aiming to strike a fair balance when working to open a new stretch. We follow an approach set out in the approved Coastal Access Scheme.</p> <p>Natural England submitted proposals for the Whitstable to Iwade stretch of the England Coast Path, for approval by the Secretary of State for Environment, Food and Rural Affairs, in June 2017. In the vicinity of the development site, the proposal is for the England Coast Path to follow the route of the Saxon Shore Way</p> <p>Chapter 7 of the ES includes an assessment of the visual impact of the proposal on the Saxon Shore Way (and hence the England Coast Path once opened). Natural England notes that the proposal would have a major (years 1-10) and major/moderate (10 years onwards) visual impact on users of the England Coast Path, which is significant. We recognise the attempts made by the applicant to mitigate this visual impact by softening the edges of the solar park, as indicated in the Outline Landscape and Biodiversity Management Plan (LBMP).</p>	<p>The Applicant has continued to liaise with Natural England regarding the planting scheme to ensure this reflects the landscape character of the surrounding area.</p> <p>The intention for the scrub planting was to replicate the natural regeneration of low-density scrub found within adjacent marshland for example Oare Marshes where such scrub provides intermittent and variant habitat for birds, and that found on the banks either side of the Saxon Shore Way. The density specified is such that the scrub would resemble single regenerating scrubby trees at 50 plants per hectare. Scrub density and species was informed by a survey of existing vegetation as set out in Appendix G of the Outline LBMP [REP6-005].</p> <p>The planting proposals are in keeping with the local landscape character and will provide additional biodiversity benefits.</p>	<p>Agreed.</p>

Natural England Comments	Applicant Comments	Status (NE to complete/update)
<p>Natural England will continue to work with the applicants on the Outline LBMP and advise on the planting scheme. Our view is that the amount of scrub proposed is inappropriate in this landscape. In particular, there is extensive planting in the SE corner along Faversham Creek, which is presently open landscape. Natural England would advocate reedbed planting as an alternative, which would have a softening effect on the edge of the solar park, but would be more in keeping with the marsh landscape and current biodiversity interests.</p>		
<p>The applicant has included part of The Swale SPA/Ramsar/SSSI within the red-line boundary. This is welcomed as it gives the opportunity to manage this part of the designated site, and the AR HMA, together. Natural England will continue to work with the applicant on the management prescriptions for the designated site, but hydrological and grazing management in this unit will constitute an enhancement for biodiversity.</p>	<p>This is noted by the Applicant. The Applicant has continued to work with Natural England and the HMSG to develop the most appropriate management prescriptions for the two SSSI units at the east of the site: S15 M ATTWOOD CLEVE MARSH (049) and CLEVE MARSH WEST (063).</p> <p>These prescriptions are set out in Appendix K of the Outline LBMP [REP6-005].</p>	<p>NE agrees with the enhancement works outlined at Appendix K of the Outline LBMP.</p>
<p>The Outline LBMP sets out the management of various habitats within and outside the solar park area, including management of land to mitigate the impacts of the proposal on designated nature conservation sites. Natural England will continue to work with the applicant, and other partners, on the LBMP through the Habitat Management Steering Group, in order to maximise the opportunities for wildlife as a result of the proposal.</p>	<p>This is noted by the Applicant. The Applicant will likewise continue to work with Natural England and the HMSG to implement the most appropriate management prescriptions for the various areas of the site to maximise opportunities for wildlife, in line with The Applicant's Environmental Policy Statement.</p>	<p>Agreed</p>
<p>In particular, Natural England would like to discuss the grazing regime for the areas between the panels and ditches, and where the fence line will be situated. We would like to see rough grassland that maximised the habitat for small terrestrial mammals, to encourage foraging marsh harriers.</p>	<p>This is noted by the Applicant. The Applicant will continue to work with Natural England and the HMSG to implement the most appropriate management prescriptions for the areas between the solar panel tables and arrays.</p>	<p>NE agrees that the Outline LBMP [REP6-005] contains suitable management measures for the rough grassland around the arrays.</p>

Natural England Comments	Applicant Comments	Status (NE to complete/update)
<p>We would also like to see the Outline LBMP include prescriptions for the water level control, vegetation management and reprofiling of the ditches within the site, to promote more extensive reedbed development.</p>	<p>This is noted by the Applicant. The Applicant will continue to work with Natural England and the HMSG to implement management prescriptions in the Aquatic Habitats Management Plan, Appendix H of the Outline LBMP [REP6-005] for water level control and ditch habitat management.</p>	<p>NE agrees that the Outline LBMP [REP6-005] contains suitable water level control and habitat management measures. We welcome the creation of reedbed between the arrays and AR HMA.</p>
<p>The development site supports a good range of farmland birds, and those associated with lowland damp grassland and fens. However, this is not because the farmland is managed particularly to encourage wildlife. The importance of the site is down to its location, bordered on three sides by The Swale SPA/Ramsar/SSSI. Therefore, birds supported by the more natural habitats of the designated sites 'spill over' into the development site. Those species associated with the ditches and reedbed habitat, eg bearded tit, Cetti's warbler and reed bunting, will likely benefit from the proposal as ditch habitat will be improved as clearance will happen less often and marginal plants will be encouraged. However, there will be a loss to those species (other than the SPA species that are the specific focus of the AR HMA) that use the arable fields or are attracted by the arable farming operations. For example, the 2016 breeding bird survey recorded 25 yellow wagtail and 75 skylark territories, some of which will be able to use the HMAs, but there will be a net loss overall, simply due to the reduction in area available. Similarly, the arable fields support occasionally very large flocks of wintering farmland birds: 1000 skylarks in autumn 2017 following cultivation, and a peak of 10000 starlings in winter 17/18. The AR HMA and lowland meadow HMA will provide foraging opportunities for these species, though it is uncertain as to whether such large flocks will be supported as those that were seen as a result of the arable farming operations.</p>	<p>The Applicant agrees that some bird species will benefit from the habitat changes implemented with the proposal, while there will be losses for other bird species; this is reflected in the assessment in sections 9.5.3.29 to 9.5.3.29 of Chapter 9 - Ornithology of the ES (document reference 6.1.9).</p>	<p>Agreed</p>

5 WRITTEN REPRESENTATION COMMENTS [REP2-096]
Table 4: Written Representation Comments

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
INTRODUCTION			
<i>Purpose and structure of these representations</i>			
1	These Written Representations are submitted in pursuance of rule 10(1) of the Infrastructure Planning (Examination Procedure) Rules 2010 ('ExPR') in relation to an application under the Planning Act 2008 for a Development Consent Order ('DCO') for the construction and operation of a solar photovoltaic array, energy storage facility and associated infrastructure ('the Project') submitted by Cleve Hill Solar Park Ltd ('the Applicant') to the Secretary of State.	These comments are noted.	No further comment
2	Natural England has already provided a summary of its principal concerns in its Relevant Representations, submitted to the Planning Inspectorate on 28 January 2019 [RR-827]. This document comprises an updated detailed statement of Natural England's advice, as it has developed in view of the common ground discussions that have taken place with the Applicant to date. In particular, this advice takes account of discussions through the Habitat Management Steering Group (HMSG), which is made up of the Applicant and their consultants, Natural England, the Environment Agency, Kent Wildlife Trust and the RSPB.	The Applicant has continued to discuss Natural England's principal concerns, and is expecting to agree and submit this final Statement of Common Ground with Natural England ahead of Deadline 7.	Agreed

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
3	<p>These representations are structured as follows:</p> <ul style="list-style-type: none"> a. Section 2 describes the statutory conservation designations, features and interests that may be affected by the Project and need to be considered. b. Section 3 comprises Natural England's submissions in respect of the nature conservation issues that concern it. c. Section 4 comprises Natural England's submissions in respect of its statutory landscape role. d. Section 5 describes Natural England's role and comments in relation to access and biodiversity enhancements <p>Annex A is a dedicated section answering the Examining Authority's written questions which were asked on 7 June 2019, cross-referenced to the rest of this document.</p>	<p>These comments are noted.</p> <p>The responses to the Examining Authority's first written questions are not replicated in this document, the Applicant commented on Natural England's responses to the first written questions in an additional submission [AS-023] made in July 2019.</p>	Agreed
CONSERVATION DESIGNATIONS, FEATURES AND INTERESTS THAT COULD BE AFFECTED BY THE PROPOSED PROJECT			
4	The following is a brief summary of the interest features of the relevant designated areas of concern in this matter.	No comment required.	No comment required.
<i>International conservation designations</i>			
5	The Swale Special Protection Area (SPA), which is designated for:	The Applicant welcomes confirmation of the designated features applicable to The Swale SPA.	No further comment

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
	<ul style="list-style-type: none"> • Wintering dark-bellied brent geese • Wintering dunlin • Assemblage of wintering waterbirds (main component species: dark-bellied grent goose, European white fronted goose, shelduck, shoveler, wigeon, pintail, teal, little egret, oystercatcher, avocet, lapwing, golden plover, grey plover, curlew, bar-tailed godwit, black-tailed godwit, knot, ruff, sanderling, dunlin, green sandpiper, greenshank.) • Assemblage of breeding birds of damp grassland (main component and characteristic species: mallard, shelduck, moorhen, coot, lapwing, redshank, reed warbler, reed bunting, other breeding ducks and waders, yellow wagtail, marsh harrier.) 		
6	<p>The Swale Wetland of International Importance under the Ramsar Convention (Ramsar site), which is designated under:</p> <ul style="list-style-type: none"> • Criterion 2 – the site supports nationally scarce plants and at least seven red data book invertebrates • Criterion 5 – assemblage of wintering waterfowl of international importance 	<p>The Applicant welcomes confirmation of the designated features applicable to The Swale Ramsar Wetland site.</p>	<p>No further comment</p>
7	<p>The Ramsar Information Sheet also identifies five bird species for possible future inclusion under criterion 6. These species are considered in Natural</p>	<p>The Applicant has provided a comment in agreement with Natural England's response to question 1.1.21 in the Applicant's Comments on Responses to ExQ1 [AS-023].</p>	<p>Agreed</p>

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
	England's answer to question 1.1.21 (see Annex 1 to this representation).		
8	Natural England's view is that all other international conservation designations can be ruled out as being potentially affected.	The Applicant welcomes confirmation of this view, which is shared by the Applicant.	No further comment
<i>National conservation designations</i>			
9	<p>The Swale Site of Special Scientific Interest (SSSI), which is notified for:</p> <ul style="list-style-type: none"> • Aggregations of breeding birds (avocet, bearded tit, gadwall, lapwing, marsh harrier, pochard, redshank and shoveler) • Aggregations of non-breeding birds (bearded tit, black-tailed godwit, brent goose, curlew, dunlin, gadwall, great-crested grebe, grey plover, hen harrier, knot, marsh harrier, oystercatcher, pintail, redshank, ringed plover, shelduck, shoveler, spotted redshank and teal.) • Assemblages of breeding birds of lowland damp grasslands and lowland fen • Invertebrate assemblages of saltmarsh and transitional brackish marsh, open water on disturbed sediments, and reed-fen and pools • Vascular plant assemblage • Habitats: brackish lakes, ditches, lowland fen, ponds, saltmarsh and standing waters. 	The Applicant welcomes confirmation of the notified features applicable to The Swale SSSI.	No further comment

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
10	<p>The Swale Estuary Marine Conservation Zone (MCZ), which is designated for:</p> <ul style="list-style-type: none"> • Estuarine rocky habitats • Intertidal coarse sediment • Intertidal mixed sediments • Intertidal sand and muddy sand • Low energy intertidal rock • Subtidal coarse sediment • Subtidal mixed sediments • Subtidal mud • Subtidal sand 	The Applicant welcomes confirmation of the designated features applicable to The Swale Estuary MCZ.	No further comment
<i>European and nationally Protected Species</i>			
11	<p>Great crested newts and water voles are present within the application site. Natural England is in discussion with the applicant regarding these species. Once we receive satisfactory draft licence applications, we will supply a Letter of No Impediment.</p>	Letters of No Impediment in respect of great-crested newt and water vole were received from Natural England on Thursday 25 July 2019 and have been submitted to the examination at Deadline 3 [REP3-029].	Agreed
<i>Landscape designations</i>			
12	<p>Kent Downs Area of Outstanding Natural Beauty (AONB) The proposal is around 7.6km from the AONB, and so there will be distant views of the solar park from the AONB. The distinctive landform and dramatic views are one of the special qualities of the Kent Downs AONB. The Management Plan for the AONB includes Policy SD8: "Proposals which negatively impact on the distinctive landform, landscape character, special</p>	The views from the AONB have been assessed in the LVIA [APP-037] at section 7.5 and are shown in viewpoint 21 [APP-063 to APP-196].	Agreed

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
	characteristics and qualities, the setting and views to and from the AONB will be opposed unless they can be satisfactorily mitigated."		
NATURAL ENGLAND'S NATURE CONSERVATION CONCERNS AND ADVICE			
<i>The principal issues in relation to statutorily designated nature conservation sites</i>			
13	<p>Natural England identified the following main issues in its Relevant Representations:</p> <ul style="list-style-type: none"> a. Noise and visual disturbance to birds during construction b. Dust and water quality impacts c. Loss of habitat <p>These issues will be discussed in corresponding sections below along with any updates on the progress or resolution of issues.</p>	The Applicant notes this summary, and responds to the detailed comments below.	No further comment
Noise and visual disturbance during construction			
14	The birds for which The Swale SPA, Ramsar site and SSSI are designated are susceptible to noise and visual disturbance. Natural England's supplementary advice on the conservation objectives for the SPA1 states that: "Disturbance should be judged as significant if an action (alone or in combination with other effects) impacts on (water)birds in such a way as	The Applicant welcomes the clarification from Natural England regarding the definition of disturbance as set out in the supplementary advice on conservation objectives for The Swale SPA.	No further comment

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
	<p>to be likely to cause impacts on populations of a species through either</p> <ul style="list-style-type: none"> I. changed local distribution on a continuing basis; and/or II. changed local abundance on a sustained basis; and/or III. the reduction of ability of any significant group of birds to survive, breed, or rear their young." 		
<i>Wintering birds on intertidal habitat</i>			
15	<p>Table 9.6 of the Environmental Statement (ES) Ornithology chapter [APP-039] summarises the SPA component species using the intertidal area to the north of the proposed solar park. This indicates that significant numbers of SPA (and SSSI) species use this area.</p>	<p>The Applicant agrees with Natural England's summary regarding use by birds of the intertidal habitats adjacent to the Development site.</p>	Agreed
16	<p>Whilst Natural England does not agree with the use of noise thresholds to predict whether there will be adverse impacts (as impacts are site and species specific), we agree they are helpful in assessing potential for impacts. Figure 3 in the Report to Inform an Appropriate Assessment (RIAA) [APP-026] shows that the 70dB_Lmax noise contour does not reach the intertidal area. However, the 55dB_Lmax contour extends 320m from the source of the piling, and hence extends into the intertidal. Therefore, there is the potential for wintering birds</p>	<p>The Applicant welcomes Natural England's comment that the precautionary noise thresholds used in the assessment have been useful in assessing the potential for impacts on wintering birds in the intertidal zone.</p>	Agreed

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
	to be impacted. This applies particularly to birds roosting at Castle Coote, as options for alternative high tide roosts are more limited than foraging areas, and birds are pushed closer to the source of disturbance by the high tide		
17	Disturbance mitigation measures are set out in the Outline SPA Construction Noise Management Plan (CNMP) [APP-243], which are welcomed. However, in our Relevant Representation [RR827] Natural England raised concerns that these were not sufficient to be certain that adverse impacts would be avoided at high tide. This issue has been discussed through the Habitat Management Steering Group (HMSG) and the group agreed that timing of piling works closest to Castle Coote should take place outside the core wintering period (November to February inclusive). The Applicant has indicated, through our common ground discussions, that an updated SPA CNMP will be submitted that will include timing restrictions on piling to avoid disturbance to birds using the high tide roost at Castle Coote. Subject to the detail contained in an updated SPA CNMP, Natural England confirms this is an acceptable approach to mitigating disturbance to wintering birds.	The Applicant confirms that an updated version of the SPA CNMP including the additional detail regarding sensitive timing of works near Castle Coote has been provided at Deadline 3 [REP3-008]. The Applicant welcomes Natural England's confirmation that this approach to mitigating disturbance impacts to wintering birds is acceptable.	NE agrees that the updated SPA CNMP [REP3-008] contains sufficient measures to mitigate disturbance to wintering birds within the SPA, and in particular, Castle Coote, secured through the dDCO. Therefore, NE can advise that when a formal appropriate assessment is undertaken, the evidence before the Secretary of State is sufficient to support a conclusion of no adverse effect on the integrity of the SPA.
<i>Breeding birds of grazing marsh and reedbed</i>			
18	The grazing marsh and reedbed to the north and west of the solar farm site	These comments are noted.	No further comment

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
	supports breeding birds which form components of the breeding bird assemblage of the SPA (and SSSI notified features, including bearded tit). These birds are susceptible to disturbance, which may affect their productivity, and so mitigation measures are necessary.		
19	In our Relevant Representation [RR-827], Natural England raised concerns as to whether the mitigation measures set out in the Outline SPA CNMP [APP-243] and the Breeding Bird Protection Plan (BBPP) (Appendix B of the Outline Construction Environment Management Plan) [APP-205] gave sufficient certainty that impacts would be avoided. In particular, the BBPP states (paragraph 158) that 'where practicable' construction activities closest to The Swale will be avoided. Through our common ground discussions, the Applicant has confirmed that the intention of this statement was to avoid restricting activities that do not exceed the noise threshold, and has agreed to review the wording of the BBPP to provide greater certainty and clarity.	The Applicant has updated the wording of the BBPP (Appendix B of the Outline CEMP) [REP6-007] to provide clarity regarding this point.	NE agrees with the updated wording in the BBPP [REP6-007].
<i>Breeding marsh harriers</i>			
20	Marsh harriers are an important component of the SPA breeding bird assemblage. Therefore, Natural England welcomes the specific commitment to a 500m exclusion zone around any marsh	The Applicant welcomes Natural England's agreement regarding the applied construction mitigation set out in the BBPP [REP6-007] to protect nesting marsh harrier from disturbance.	Agreed

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
	<p>harrier nest (paragraph 165 of the Breeding Bird Protection Plan) [APP-205], in order to avoid noise and visual disturbance.</p>		
<i>Wintering brent geese, lapwings and golden plovers</i>			
21	<p>Surveys undertaken in support of the proposal indicate that large numbers of brent geese, lapwings and golden plovers use the arable land within the development site in the winter. Natural England agrees with the statement (in paragraph 163 of the RIAA) [APP-026] that these species will not be adversely impacted in the first winter of construction as there will be sufficient undeveloped area for them to continue to forage. However, there will be an impact in the second (and third) winter as the Arable Reversion Habitat Management Area (AR HMA) will be subject to construction disturbance.</p> <p>As this disturbance is temporary, Natural England's view is that construction disturbance and displacement, alone, is not likely to lead to an adverse effect on wintering geese and plovers. However, it will be necessary to create the AR HMA grassland as early in the construction timetable as possible, to ensure that the habitat is established and available as soon as construction finishes. Natural England recommends adding detail on</p>	<p>The Applicant welcomes Natural England's confirmation that displacement is not likely to lead to an adverse effect on wintering geese and plovers.</p> <p>Additional details regarding the timing of ground preparation, sowing and management of the AR HMA have been provided by way of updating the outline LBMP. The updated document has been provided at Deadline 6 [REP6-005].</p> <p>Section 18 of the Outline LBMP [REP6-005] sets out the timing of the grassland implementation in relation to construction start dates.</p>	<p>NE agrees that the Outline LBMP [REP6-005] sets out the seed mix and ground preparation advised at the HMSG meeting on 23 Aug 19; and that Section 18 sets out that sowing will take place before the first winter after construction starts.</p>

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
	the timing of the arable reversion to the Outline Landscape Biodiversity Management Plan (LBMP) [APP-203].		
<i>Dust and Water Quality Impacts</i>			
22	Habitats and species that make up the special interest of the Ramsar site, SSSI and MCZ in the vicinity of the proposal are susceptible to smothering from dust, and changes in water quality. However, Natural England's advice is that standard construction mitigation measures, as set out in the Outline CEMP [APP-205], are sufficient to address potential dust emissions, and risks to water quality from the operation of plant and vehicles.	The Applicant welcomes Natural England's confirmation that the applied construction mitigation set out in the outline CEMP [REP6-007] are sufficient in this respect.	Agreed
23	Paragraph 3.9 of Natural England's Relevant Representation [RR-827] requested information on the current level of pesticide, fertiliser and herbicide use so that the benefit of ceasing the current arable operation can be quantified. This would also be helpful in determining whether the proposed application on the AR HMA is less than the amount of nitrogen currently applied, and hence whether this represents a benefit to the Ramsar and SSSI ditch plant species.	Further details of baseline fertiliser application were provided at Deadline 4 [REP4-050] and Natural England confirmed in its written summary of oral submission at Deadline 5 [REP5-050] that: "Natural England is satisfied that the fertiliser application rates over the whole solar farm site will be lower than in the current situation, as evidenced by [REP4-050]. There will therefore be lower nutrient inputs to the ditches if the solar farm is built, which will be a benefit to the Ramsar ditch features over the current situation. This resolves the issue Natural England raised in paragraph 3.3.2 of our Written Representation [REP2-096]".	Agreed
24	Through our common ground discussions, the Applicant has confirmed that it has not been possible to identify	The Applicant confirms that the option proposed in the updated outline LBMP is for application of up to 12 tonnes of farmyard manure per hectare per year to the	Agreed.

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	<p>the levels of application for each individual field, or for the CHSP area as a whole, and that the information is only available at a whole farm scale. Nevertheless, the level of fertiliser applied will be less than the current baseline, as the proposal is to only fertilise the AR HMA rather than the whole CHSP site. Natural England accepts this is likely to be the case. However, in order to avoid nutrient run-off into the ditches surrounding the AR HMA, and to ensure a significant improvement on the current situation, Natural England recommends application of 12 tonnes organic manure/ha/year, leaving a 10m buffer between the ditch and the fertiliser application. We understand the Applicant will include details of the fertiliser application in an updated LBMP.</p>	<p>AR HMA, restricted in application to leave a 10 metre buffer adjacent to ditches, this was included in the updated outline LBMP submitted at Deadline 3 [REP3-005] and is included in the next version of the Outline LBMP (Revision E) to be submitted to the Examination at Deadline 7 (after being omitted from the Deadline 6 version [REP6-005] in error).</p> <p>A written representation covering existing agricultural inputs was provided at Deadline 4 [REP4-050].</p>	
Loss of Habitat			
25	<p>The development site supports significant numbers of brent geese, golden plovers and lapwings in the winter. Numbers fluctuate according to the type of crop planted and other factors, including time of year, but at times the number of birds on site is large, and a significant proportion of the respective SPA populations. The applicant's surveys, and data from the Kent Wildlife Trust (Table A9.6 of the</p>	<p>These comments are noted.</p>	<p>No further comment</p>

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	<p>Ornithology Technical Appendix) [APP-223], demonstrate that the development site is regularly used by wintering geese and plovers, and hence is functionally linked to the SPA/Ramsar. Natural England's view is that, in order to have sufficient certainty that an adverse effect on integrity will be avoided, there should be no net loss of foraging resource as a result of the proposal. This has, therefore, been the prime focus of our discussions with the Applicant, through the HMSG.</p>		
26	<p>As set out in our Relevant Representation [RR-827], Natural England is satisfied that the 'bird days' metric described in the Ornithology Technical Appendix [APP-223], is an appropriate method for calculating gains and losses of functional land. The bird surveys in support of the application were carried out during a representative period in the cropping cycle, and therefore the inter-annual mean of the intra-annual mean of the peak monthly counts (as described at paragraph 104 of the Ornithology Technical Appendix) is an appropriate way to calculate bird days.</p>	<p>This agreement is welcomed by the Applicant.</p>	<p>Agreed</p>
<p><i>Brent Goose Functionally Linked Land</i></p>			
27	<p>Natural England has advised the applicant that the AR HMA should maximise its production of grass for</p>	<p>These comments are noted.</p>	<p>No further comment</p>

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	<p>brent geese. This is because geese are more site faithful and have a shorter foraging distance than lapwings or golden plovers. Experimental manipulation² of management prescriptions for brent geese and accurate survey has shown that grass cut five times and fertilised with 50kgN/ha can support 2097 goose-days/ha. The study by Vickery et al. (1994) also demonstrated that there was no significant difference in goose usage of plots that were cut or grazed, the most important factor was that a short sward (<5cm) was achieved in October when the geese arrive. However, grazing (as opposed to cutting), and fertilising, both increased the protein content of grass.</p>		
28	<p>The Outline LBMP [APP-203] describes the management of the AR HMA in terms of grazing at a low stocking density to achieve a sward height of <10cm. Natural England would welcome further discussion with the Applicant as to whether the management set out in the Outline LBMP will achieve the precise number of goose-days (ie 2097 per ha) that have been used in the calculations in the RIAA [APP-026]. In particular, the goose-days in the Vickery et al. study were based on cutting to achieve a shorter sward than suggested in the Outline LBMP; and although it is noted that there was no significant difference</p>	<p>The Applicant has continued discussion with Natural England and the HMSG to set out more detail in the version of the Outline LBMP [REP6-005] submitted at Deadline 6 regarding the management and desired sward length of the grassland for geese to achieve the appropriate capacity in terms of goose-days/ha.</p> <p>The Applicant considers that the 2,097 goose-days/ha figure used to propose the extent of mitigation land required is precautionary and does not necessarily represent a maximum capacity of the grassland. The study presents this finding as the measure of capacity that geese used under experimental prescriptions for the grassland sward in the study, rather than its maximum capacity. Other sources of information and advice suggest that the required number of geese can</p>	<p>NE agrees that 2,097 goose-days/ha is not necessarily the maximum capacity of grassland, although it is at the higher end of the range of capacity figures that have been derived experimentally.</p>

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	<p>between goose usage on cut or grazed plots, the paper does not give a goose-days figure for grazed land.</p>	<p>be accommodated in much smaller areas of grassland (e.g. the RSPB publication <i>Farming and Wildlife</i> (Andrews and Rebane, 1994) recommends 15-30 ha of alternative feeding area for every 1,000 geese; Summers and Critchley (1990) recommended 50 ha for every 1,000 geese. The peak-mean count of brent geese using the arable land within the Development site was approximately 850 birds, so in effect, the c. 50 ha of grassland in the AR HMA is seeking to provide for 850 birds.</p>	
29	<p>The Outline LBMP [APP-203] states (paragraph 295) that organic fertiliser may be applied in the autumn. Natural England agrees that an adaptive approach is appropriate to managing the AR HMA, however, we recommend that fertiliser is applied every year, given the evidence that this increases the nutritional value of the grass. It is also likely to benefit lapwings and golden plovers by increasing the biomass of soil invertebrates (see below for further information). As noted at paragraph 3.3.3 of this representation, Natural England recommends application of 12 tonnes organic manure/ha/year, leaving a buffer of 10m between the application and the edge of any ditches. As fertiliser application achieves greater goose-days but should be avoided within 10m of ditches to avoid impacting other designated features, we recommend calculating whether this has any impact</p>	<p>The Applicant confirms that fertiliser would be applied annually and this has been updated in the outline LBMP [REP6-005] (e.g., at section 15.4.3).</p> <p>The capacity figure of 2,097 goose-days per hectare for fertilised grassland was taken from Vickery <i>et al.</i> (1994). The same study reports a capacity of 1,562 goose-days per hectare in unfertilised plots of grassland. Using these same figures results in the following calculation:</p> <p>Functional area: 50.1 ha Fertilised functional area: 43.6 ha Unfertilised functional area: 6.5 ha</p> <p>Capacity = (43.6 × 2,097) + (6.5 × 1,562) = 101,580 goose-days. This is very similar to the 101,940 goose-days as measured by the peak-mean metric in arable fields of the Development site. The Applicant also reiterates the point above that these numbers do not represent a maximum capacity of grassland to support geese and other sources of management advice</p>	<p>NE welcomes the update regarding fertiliser in the outline LBMP.</p> <p>We also welcome the calculations regarding the goose-days supported by fertilised and un-fertilised land. NE considers that the difference of 360 goose-days when taking into account the unfertilised buffer along the ditches is not significant in the context of the number of goose-days supported by the whole AR HMA.</p>

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	on the sufficiency of the AR HMA for brent geese.	suggest that larger numbers of birds could be accommodated in the same or smaller extent of land.	
<i>Lapwing and Golden Plover Functionally Linked Land</i>			
30	Lapwings and golden plovers feed on soil and surface invertebrates. Therefore, they do not compete for the same food as brent geese and can potentially be accommodated on the same piece of land. Whether the mitigation land can provide for all the geese, lapwings and golden plovers necessary will depend on: a) Whether there is physically enough space for the geese and waders to feed, as they tend to form separate flocks; b) Whether management of a dense grass sward to feed the geese means that soil invertebrates are less available to the waders.	As advised by Natural England during pre-application consultation, the management of the AR HMA is focussed on the provision of sufficient resources for Brent geese. The aim is therefore to provide a nutrient-rich short sward grassland favoured by this species. However, short-sward grassland is also known to be a habitat used, often preferentially, by golden plovers and lapwings – this was described in the literature review in Section 9.6.2.2 of Appendix A9.1: Ornithology Technical Appendix [APP-223] and Section 6.1.2.5 of the RIAA [APP-026]. The type of grassland preferred is short-sward (<10 cm), permanent and long-established; such grassland would typically have a close sward, providing the suitable micro-climate within which the birds' invertebrate prey is available to them above, at and near the soil surface. Barnard and Thompson (1985) analysed sward density as part of their study into foraging by gulls and plovers and found that older pastures (>25 years old) were preferred by foraging lapwings over newly established grassland (<4 years since sowed) and had a significantly higher sward density than newly established grassland. It is also proposed to fertilise the sward using farmyard manure, additionally providing suitable conditions for the birds' invertebrate prey. It is therefore the Applicant's view that the proposed management of the AR HMA to provide short-sward, fertilised grassland provides suitable conditions for foraging golden plover and lapwing as well as Brent goose. In the PEIR, the	NE agrees that short-sward grassland is used by brent geese, lapwings and golden plovers. We also agree that a dense grass sward is not necessarily a hindrance to foraging waders. This issue was discussed at the HMSG meeting on 23 August 19. Whilst lapwings and golden plovers sometimes preferentially use grassland, they tend to favour long-established pastures. In the Cleve Hill context, at certain times lapwings and golden plovers were preferentially using the arable land, rather than the SSSI grassland. The experience of the land managers on the HMSG was that waders are attracted in to an area by the bare earth of arable and do not tend to roost on grassland without scrapes. Therefore, the recommendation was to create a scrape on the SSSI grassland to attract birds in, so that they are more likely to use the AR HMA for foraging.
31	The bird-days calculations for these species (described at paragraph 131 of the Ornithology Technical Appendix) come from work by Gillings et al (2007) on arable land in Norfolk ³ . We understand the Applicant has not been able to find a bird-days calculation for plovers on permanent pasture in the scientific literature. Therefore, it is not clear that grassland will support an equivalent number of bird-days to arable land. Whilst grassland can support a greater biomass of earthworms than arable, it is not certain that a dense		The Applicant has included additional measures as requested in the Outline LBMP [REP6-005] submitted at Deadline 6 at Appendix K, and Natural England is in agreement that the measures set out will provide the mitigation required.

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	<p>sward will allow the birds the same access to the food as arable habitat (as noted above). In addition, Gillings et al (2007) calculated their bird-days based on the fields that actually held plovers as they were concentrated into a few fields. Calculating the density of birds across the whole Norfolk study area would have produced much lower bird-days. It is, therefore, not clear from that study why the plovers were aggregating in the fields they did, and whether those conditions will be replicated in the AR HMA.</p>	<p>Applicant presented additional evidence regarding preferential use of grassland by Golden plovers and lapwings to support the reasoning that grassland would have a higher capacity to support these species than arable crops; however, following Section 42 consultation, this was removed to take the precautionary approach that grassland might only support a similar capacity for these to arable land. As a result, it is the capacity figures from Gillings et al (2007) that have been applied in assessing the potential for the AR HMA to support the required numbers of lapwing and golden plover.</p>	
32	<p>Using the bird-days calculations from Gillings et al (2007) indicates that 56ha of mitigation land is required for lapwings and 18.5ha for golden plovers, ie there is a small shortfall for lapwings, but over-provision for golden plovers. The Applicant suggests, in their Ornithology Technical Appendix, that the shortfall in lapwing capacity can be made up by the over provision for golden plovers, as the two species feed in the same areas, and the mitigation requirements are not additive.</p>	<p>The Applicant has reviewed the Gillings et al. (2007) study. There is insufficient detail in the paper about individual field use to ascertain how often lapwings and golden plovers were found foraging together and potentially competing for resources. However, the paper does state, for example: "In general both species selected and avoided the same habitats".</p> <p>Where the paper describes the bird-days/ha use by golden plovers and lapwings, it states: "...transect fields sustained on average 250,000 Golden Plover bird-days (range 165,000–301,000) and 160,000 Lapwing bird-days (range 126,000–259,000) per winter (October to February). These equate to densities of 121 Golden Plover bird-days/ha and 78 Lapwing bird-days/ha when calculated over the whole study area. However, plovers were concentrated into very few fields, meaning that although the total study area was 2063 ha, the area actually used (sum of field areas weighted by their frequency of occupancy) was only</p>	
33	<p>Natural England is not certain that the bird-days figures can be used in this way, as it implies that there is competition between the two species for the same food resources, and that unused resource for golden plover can be used by additional lapwing. Therefore, we recommend that the Applicant provides</p>	<p>Where the paper describes the bird-days/ha use by golden plovers and lapwings, it states: "...transect fields sustained on average 250,000 Golden Plover bird-days (range 165,000–301,000) and 160,000 Lapwing bird-days (range 126,000–259,000) per winter (October to February). These equate to densities of 121 Golden Plover bird-days/ha and 78 Lapwing bird-days/ha when calculated over the whole study area. However, plovers were concentrated into very few fields, meaning that although the total study area was 2063 ha, the area actually used (sum of field areas weighted by their frequency of occupancy) was only</p>	<p>NE agrees that the Gillings et al (2007) study appears to indicate that lapwings and golden plovers used the same fields. We also agree that the further references cited indicate that there can be competition for food resources between the two species such that food not used by one species can be used by the other.</p>

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	<p>further information on whether the lapwings and golden plovers were found foraging together in the Gillings et al (2007) study, whether competition for the same resources is likely, and hence whether it is appropriate to add the bird-days for the different species into a combined plover-days figure.</p>	<p>160 ha, giving densities of 1,560 Golden Plover bird-days/ha and 1,000 Lapwing bird-days/ha.”</p> <p>Whilst this does not specifically state that the 160 ha area was used by both species, the Applicant is of the opinion that any significant segregation between lapwings and golden plovers would have been reported in the paper.</p> <p>There is evidence of competition between the species for food. Golden plovers are described by Barnard and Thompson (1985) as using the presence of lapwing flocks to guide them to areas of good foraging. Gregory (1987) states that values of α (a measure of overlap in use of habitats) was very high, suggesting near total overlap between the two species in his study area. Regarding Barnard & Thompson (1985), the lack of impact of golden plovers on the time budgeting and feeding efficiency of lapwing cannot be correlated with an absence of competition for resources and this potentially provides support for the Applicant's position; if both species feed in the same location on the same resources with unaffected foraging efficiency, then depletion of resources will occur more rapidly than if there was an effect of one species on the other. Hence if one species is under-utilising the available resources, then more will be available for the other species. That study went on to report that interspecific aggression appears to be related to prey depletion as the local density of birds increases, and increases in local density of birds within the flock results in a reduction in individual feeding efficiency. Barnard & Thompson (1985) also report that in established foraging flocks within fields, there tends to be a much lower density of</p>	<p>It is helpful to have the figures presented for bird-days capacity and habitat requirement for both the peak mean and monthly mean figures. NE advice in the pre-application phase was that the peak mean figures should be used as the survey data are snapshots rather than through the tide counts, so a precautionary approach should be taken. Also because areas that are essential to a bird's energetic requirements may be in regular, but not constant, use. Therefore, typical use will be defined by peak counts.</p> <p>NE has reviewed the further evidence from correspondence with Dr Gillings [AS-040] in relation to the use of his bird-days figures and agrees that this correspondence is supportive of the Applicant's position.</p>

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		<p>lapwings in those parts of the flock containing golden plovers and vice versa, which indicates that there is direct competition for resources.</p> <p>However, the Applicant recognises that there is a degree of uncertainty in this respect. This is one reason why a very use of the Development site by the wintering birds. The assessment for the Development has been made on the basis of only using the highest of any counts made in each month of the baseline surveys and averaging these peak monthly counts. This is in contrast for example to Gillings (2007) where the bird-days capacity of the utilised arable fields was calculated on the basis of the average across all survey visits. The result of use of the peak-mean for the CHSP assessment is likely to result in an overestimation of the use of the site and hence there is likely to be a degree of over-provision of the area required to mitigate for loss of foraging are to the Development. This is illustrated by the difference in two metrics for lapwing and golden plover: (i) the inter-annual mean of the intra-annual monthly peak-mean (using just the highest counts each month), and (ii) the interannual mean of the intra-annual monthly mean (using all counts each month); for lapwings (i) results in 56,023 bird-days (Oct-Mar) compared to (ii) 23,237 bird-days (which equates to 23.2 ha of land based on 1,000 bird-days per hectare), whilst for golden plover (i) results in 28,801 bird-days (Oct-Mar) compared to (ii) 7,877 bird-days (which equates to 5 ha based on 1,560 bird-days per ha).</p>	

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		This position is further supported by the submission of further evidence from correspondence with Dr Gillings to the Examination at Deadline 5 [AS-040].	
<i>Marsh Harrier Functionally Linked Land</i>			
34	Marsh harriers are an important component of the breeding bird assemblage and forage along the ditches within the development site. There is some uncertainty as to whether individuals will continue to forage within the solar park site as there are no equivalent sites with which to compare, regarding the response of marsh harriers. However, the setting back of panels to a minimum of 15m from the ditch is helpful in reducing the risk that 'pinch points' will deter birds. Natural England's view is that creating rough grassland to maximise the production of small mammals is crucial in encouraging marsh harriers to continue to forage in the area.	<p>The outline LBMP [REP6-005] sets out the prescriptions for establishment of large areas of 'grazing marsh grassland' between the solar panel arrays deployed in each field and has been developed further to include objectives and prescriptions for enhancing the water environment, including establishment of new reedbed. There is no published evidence either way regarding the reaction of marsh harriers to solar arrays of this scale, or any other scale, in the landscape. The inter-array grasslands will be a minimum of 30 m wide (or more, allowing for the ditch width), extending up to 80 m wide in some places and will be unbroken for substantial lengths spanning the site. A marsh harrier was witnessed foraging along a narrow grassland strip adjacent to a solar array on the Isle of Sheppey; the Applicant accepts the difference in scale, but the observation demonstrates that they are not averse to the presence of solar panels.</p> <p>On the basis of the provision of large quantity of good foraging habitat over and above the baseline availability and the absence of evidence that marsh harriers would be displaced at landscape scale, the assessment in Chapter 9 – Ornithology of the ES [APP-039] concluded that harriers will continue to forage at the site and will benefit from utilising the substantially increased area of suitable foraging habitat.</p>	<p>It is agreed that the management set out in the outline LBMP will improve the site for small mammals and hence marsh harrier foraging habitat. There is uncertainty over whether individual birds will continue to forage within the solar array site. However, NE has advised that, as predatory birds, at least some individuals are likely to overcome any reticence towards the presence of the solar panels, if a plentiful food supply is provided.</p> <p>This issue was discussed at the HMSG meeting on 23 August 19 and the group advised that further information, including visualisations of the habitat being provided along the ditches, would be helpful to address the uncertainty over marsh harrier behaviour.</p> <p>This information was provided to the examination at Deadline 4 [REP4-023] and [REP4-030] and is helpful in demonstrating the amount of habitat available.</p> <p>The Applicant has also provided an additional written representation on Marsh Harrier to the examination at Deadline 7. NE's view is that this is helpful in demonstrating the areas of foraging habitat with or without excluding marsh harriers from the solar array. NE's position is that there is sufficient precaution built into the assumptions such that can advise that when a formal appropriate assessment is undertaken, the</p>

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		Further detail in respect of this point is included in Table 5 within section 6 of this document, lines 12, 13, 15 and 17.	evidence before the Secretary of State is sufficient to support a conclusion of no adverse effect on the integrity of the SPA.
<i>Future land uses</i>			
35	In our Relevant Representation [RR-827], Natural England noted that the Environment Agency's Medway Estuary and Swale Coastal Flood and Erosion Strategy (MEASS) included the Cleve Hill site as a location for managed realignment in the 2nd epoch of that strategy. The Habitats Regulations Assessment for MEASS requires that intertidal habitat is created to compensate for losses due to sea level rise and coastal squeeze. Natural England understands that the Applicant is drafting an additional Requirement for the DCO to address the Environment Agency's request for a time limit on the consent. We will comment on the draft DCO when submitted, but we welcome the steps taken to resolve this issue.	The Applicant discussed the wording of Requirement 17 (previously 15 and 16) during the Issue Specific Hearing 2 on the draft DCO [REP3-015]. Updated wording for this Requirement was provided in the version of the draft DCO submitted at Deadline 6 [REP6-003].	NE agrees with the wording of Requirement 17.
<i>The Swale SSSI and The Swale Estuary MCZ</i>			
36	Natural England's view is that the mitigation measures set out in section 3.2 to 3.4, above, are sufficient to address potential impacts on the notified features of The Swale SSSI.	This agreement is welcomed by the Applicant.	Agreed.
37	As noted in section 2.2 above, the proposed works, are sited adjacent to	These comments are noted.	No further comment

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	<p>The Swale Estuary MCZ, which is designated for a number of habitats including low energy intertidal rock, intertidal coarse sediment; intertidal mixed sediments; intertidal sand and muddy sand; estuarine rocky habitats; subtidal coarse sediment; subtidal mixed sediment; subtidal sand; and subtidal mud. Good examples of estuarine rocky habitats have been found in the area around Cleve Marshes and good examples of subtidal coarse sediment are present around Faversham Creek, near Nagden Marshes.</p>		
38	<p>Eutrophication has not currently been noted to be significant. However it should be ensured that there are no increases in nutrients. Furthermore contaminants may impact the ecology of the Marine Protected Area by having a range of biological effects on different species within the habitat, depending on the nature of the contaminant. Therefore contractors should adhere to pollution prevention best practice guidelines including use of materials that are non-toxic to the marine environment.</p>	<p>The Development would result in improvements to water quality as set out in Chapter 8 - Ecology [APP-038] and Chapter 10 - Hydrology, Hydrogeology, Flood Risk and Ground Conditions [APP-040] of the ES.</p> <p>The Outline Construction Environmental Management Plan [REP6-007] includes pollution prevention measures to be implemented during construction.</p> <p>The non-toxic materials which can be used in the marine environment are set out in the dDCO [REP6-003] which includes a Deemed Marine Licence (DML) at Schedule 8, Part 1, Section 3, which states:</p> <p>"The substances or articles authorised for deposit at sea include -</p> <p>(a) iron and steel, copper and aluminium;</p> <p>(b) stone and rock;</p>	<p>Natural England is satisfied that the deemed Marine Licence avoids water quality impacts on the Swale Estuary MCZ.</p>

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		(c) concrete; (d) sand and gravel; (e) timber; (f) plastic and synthetics; (g) marine coatings; and (h) material extracted from within the offshore Order limits."	
Protected Species			
39	The development site supports populations of great crested newts and water voles. The Applicant has consulted Natural England on draft licences for these species, and we are in the process of reviewing them. Once this is complete we will supply a Letter of No Impediment.	Letters of No Impediment have been received from Natural England by the Applicant and were submitted at Deadline 3 [REP3-029].	Agreed.
NATURAL ENGLAND'S ADVICE ON PROTECTED LANDSCAPES			
Kent Downs AONB			
40	Natural England has a number of specific statutory powers and duties in relation to protected landscapes (AONBs and National Parks). These encompass: <ul style="list-style-type: none"> • designation and any variation of boundaries • monitoring effectiveness in respect to the purpose of designation • advising Ministers on management and governance. 	These comments are noted.	No further comment
41	Our role is also to bring to the attention of the Secretary of State and local		

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	<p>planning authorities the effect of developments that are likely to be prejudicial to the natural beauty of National Parks or AONBs. We are a statutory consultee under a range of planning and transport legislation and we provide landscape advice on land use planning including development plans, nationally significant infrastructure proposals, Strategic Environmental Assessments and Environmental Impact Assessments (involving assessment of landscape/seascape and visual impacts).</p>		
42	<p>Given our statutory landscape role, described above, Natural England's landscape advice focuses on the potential impacts on the Kent Downs AONB. The potential impacts of the proposal on views from the Kent Downs Area of Outstanding Natural Beauty (AONB) have been assessed in Chapter 7 of the ES [APP-037]. Viewpoint 20, at Shepherd's Hill in the AONB, is around 7.6km from the development site, and as such there are only distant views of it. Therefore, Natural England concurs with the assessment (at paragraph 414) that the proposal would result in moderate/minor effects on the AONB which are not significant.</p>	<p>The Applicant welcomes Natural England's agreement on the LVIA assessment conclusions for the AONB.</p>	<p>Agreed</p>

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NATURAL ENGLAND'S ADVICE ON OTHER, NON-STATUTORY, ISSUES			
<i>Access and Recreation</i>			
43	Natural England has a duty to provide coastal access on foot around the whole of the English coast and is aiming to complete this by 2020. This is a new National Trail with an associated margin of land predominantly seawards of this, for the public to access and enjoy. Natural England takes great care in considering the interests of both land owners/occupiers and users of the England Coast Path, aiming to strike a fair balance when working to open a new stretch. We follow an approach set out in the approved Coastal Access Scheme4.	<p>As well as the visual impact of the Development, the Applicant has included an assessment of the recreational impact of the Development on the Saxon Shore Way / England Coast Path in Chapter 13: Socio-economics, Tourism, Recreation and Land-Use of the ES [APP-043]. Section 13.5.1.4 addresses effects during construction and section 13.5.2.2 addresses operational effects.</p> <p>The updated outline LBMP submitted at Deadline 6 [REP6-005] provides further detail of the proposals for scrub planting and reed bed on the Development site.</p>	NE agrees that the low density scrub planting proposed in the outline LBMP is appropriate to the site. We also welcome the addition of reedbed between the solar array and the AR HMA, as set out in the outline LBMP submitted at Deadline 6 [REP6-005] at section 13.1 of Appendix H - Aquatic Habitats.
44	Natural England submitted proposals for the Whitstable to Iwade stretch of the England Coast Path, for approval by the Secretary of State for Environment, Food and Rural Affairs, in June 2017 . In the vicinity of the development site, the proposal is for the England Coast Path to follow the route of the Saxon Shore Way.	The Applicant also submitted an example photograph of existing scrub development adjacent to the Development site as Appendix B to the Applicant's Comments on Responses to ExQ1 [AS-023], in support of comments on responses to first written question ExQ1.8.2.	
45	Natural England's concerns regarding the England Coast Path and new developments centre on ensuring they do not affect the ability of people to exercise their coastal access rights with respect to continuing along the proposed route. As set out in the Coastal Access Scheme (section 5.5.5) our role is to work with developers to ensure that proposals take		

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	<p>account of our objective to provide the England Coast Path, and include provision for the trail on the seaward side wherever practicable. In this case, the route along the seaward side of the proposal will not be compromised. With respect to the wider visual and landscape aspects of the development and its accordance with relevant planning policies, it is not Natural England's role to provide detailed comments on these issues when responding to planning proposals, but they are nevertheless key issues to consider when determining the application.</p>		
46	<p>Notwithstanding the comments above, Natural England notes that Chapter 7 of the ES [APP037] includes an assessment of the visual impact of the proposal on the Saxon Shore Way (and hence the England Coast Path once opened), concluding that the proposal would have a major (years 1-10) and major/moderate (10 years onwards), negative, visual impact on users which is significant.</p>		
47	<p>Natural England recognises the attempts made by the applicant to mitigate this visual impact by softening the edges of the solar park, as indicated in the Outline LBMP [APP-203]. We defer to other Interested Parties to comment on the success of this. In our Relevant Representation, Natural England</p>		

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
	suggested that some of the scrub proposed could be replaced with reedbed, which would be preferable from a nature conservation point of view and more in keeping with the marsh landscape. We have discussed this suggestion with the Applicant through our common ground discussions, and understand that an updated LBMP will be submitted, which will provide more detail on the locations and type of scrub and reedbed proposed.		

6 NATURAL ENGLAND'S SUBMISSION FOR DEADLINE 5: SUMMARY OF ORAL EVIDENCE GIVEN AT THE ISSUE SPECIFIC HEARING 6 ON ENVIRONMENTAL MATTERS (11 SEPTEMBER 2019) [REP5-050]

Table 5: Written Summary of Oral Submission Comments

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
<i>Summary of oral evidence and comments on issues raised at the hearing</i>			
1	<u>Update on provision of a Letter of No Impediment</u> Natural England can confirm that Letters of No Impediment (LoNIs) were issued to the applicant for water voles and great crested newts on 25 July 2019. These letters were submitted by the Applicant at Deadline 3.	The Letters of No Impediment received on 25 July 2019 were submitted by the Applicant at Deadline 3 [REP3-029].	No comment required.
2	<u>Construction Noise Management Plan (CNMP) and Breeding Bird Construction Plan (BBPP)</u>	The Applicant welcomes Natural England's confirmation of agreement on the content of the Outline SPA CNMP [REP3-008] and BBPP within the Outline CEMP [REP6-007].	No comment required.

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
	<p>Natural England is satisfied that the revised versions of the CNMP [REP3-008] and BBPP [REP3-006] submitted by the Applicant at Deadline 3 take account of the concerns raised in our Relevant-[RR-827] and Written Representations [REP2-096]. In particular, our view is that these documents now address our concerns regarding noise contours and measures to avoid construction noise disturbance to particularly sensitive parts of the designated sites, including Castle Coote. Therefore, Natural England is satisfied that the CNMP and BBPP contain clear and sufficient measures to avoid an adverse effect on the features of The Swale Special Protection Area (SPA) and Ramsar site from construction disturbance.</p>		
3	<p><u>Fertiliser-free buffer along ditches within the Arable Reversion Habitat Management Area (ARHMA)</u></p> <p>The Applicant has confirmed that if the 10m fertiliser-free buffer along the ditches is taken into account in the calculations of capacity for brent geese, this makes a difference of 360 bird-days. Natural England's view is that this difference is not significant in the context of the total number of bird days being supported by the ARHMA. Though we note that management of the ARHMA will be crucial in achieving the bird-days required.</p>	<p>The Applicant welcomes Natural England's agreement on this point.</p>	<p>No comment required.</p>

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
4	<p><u>Fertiliser application rates [REP4-050]</u></p> <p>Natural England is satisfied that the fertiliser application rates over the whole solar farm site will be lower than in the current situation, as evidenced by [REP4-050]. There will therefore be lower nutrient inputs to the ditches if the solar farm is built, which will be a benefit to the Ramsar ditch features over the current situation. This resolves the issue Natural England raised in paragraph 3.3.2 of our Written Representation [REP2-096].</p>	<p>The Applicant welcomes the resolution of this issue.</p>	<p>No comment required.</p>
5	<p><u>Ivermectin-free manure</u></p> <p>Natural England's view is that the ARHMA should be fertilised with farmyard manure to increase the nitrogen content of the grass to benefit feeding brent geese. The Applicant has suggested that the use of manure will benefit feeding lapwings and golden plovers by increasing the invertebrate biomass of the ARHMA. However, Kent Wildlife Trust pointed out it will only achieve this dual benefit if it is pesticide-free. Natural England recognises that the Applicant wishes to retain flexibility by saying that it will source ivermectin-free manure where possible. We suggest that this issue is addressed in the next version of the Landscape and Biodiversity</p>	<p>The Applicant has included monitoring of ivermectin content of fertiliser and invertebrate density as part of the monitoring proposals for the AR HMA as set out in Appendix J of the Outline LBMP [REP6-005] (e.g., at Section 15.5.2).</p> <p>The Applicant does not believe it is necessary to further restrict use of ivermectins, however making alterations to the ivermectin content of fertiliser following monitoring is listed as a potential remedial measure should it be demonstrated that it is having a negative effect.</p>	<p>Agreed. NE is satisfied that the Outline LBMP [REP6-005] contains sufficient remedial actions, including monitoring and review of the impact of ivermectin content of manure on invertebrate populations.</p>

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
	<p>Management Plan (LBMP), perhaps through monitoring of the amounts of ivermectin-free manure and the impact this has on the invertebrates available, and wader numbers/foraging locations, with the results of this monitoring reported back to the Habitat Management Steering Group (HMSG). Natural England also supports the suggestion made by Mr Gomes at the hearing, that it would be beneficial if the grazing licence for the ARHMA could stipulate that the animals used should be ivermectin-free.</p>		
6	<p><u>Seed mix</u> Natural England confirms that it is happy with the seed mix set out in the LBMP [REP4-007] and that this takes account of the discussions at the HMSG meeting on 23 August.</p>	<p>The Applicant welcomes this agreement on the seed mix as set out in Section 15.2.3 of Appendix J of the Outline LBMP [REP6-005].</p>	<p>No comment required.</p>
7	<p><u>Lapwings and Golden Plovers – bird days</u> Natural England is satisfied that the additional submission [AS-040] by the Applicant of the correspondence with Dr Gillings confirms that the lapwing- and golden plover-days can be combined. This resolves one of the uncertainties we have identified in regard to the ARHMA for waders.</p>	<p>The Applicant welcomes this confirmation and is not aware of any other concerns in respect of lapwing and golden plover which have not been addressed.</p>	<p>Agreed.</p>
8	<p><u>Timing of sowing of habitat management areas</u> Natural England would wish to see the habitat management areas, and in</p>	<p>The Applicant is in agreement and has set out how this will be achieved in Section 18 - Grassland Implementation Timing of the Outline LBMP [REP6-005].</p>	<p>Agreed.</p>

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
	particular the ARHMA, seeded and growing before the birds arrive in the first winter after construction has started.		
9	<u>Grazing compartments</u> Natural England confirms that it is content that the proposals for stock-proof fencing are sufficient to ensure that grazing can be managed to achieve the optimum habitats for wildlife.	The Applicant welcomes this confirmation.	No comment required.
10	<u>Grazing management</u> Natural England is satisfied with what is set out at paragraphs 42 and 347 of the LBMP [REP4-007] in terms of grazing. However, as discussed at the HMSG on 23 August, the success of the grazing will depend on finding a grazier that can respond quickly to adjust the grazing pressure if necessary to achieve the right sward height at the beginning of winter.	The Applicant welcomes this confirmation and referenced the requirement for a competent grazier (e.g., at section 6.2.2 of the Outline LBMP submitted at Deadline 6 [REP6-005].	No comment required.
11	<u>Mowing vs. grazing</u> Natural England supports flexibility in management to achieve the right sward height. As CPRE pointed out at the hearing, mowing can be a risk to ground nesting birds. Therefore, Natural England recommends that grazing is used initially, and a cut is taken in late summer if the grazing has not been able to achieve the desired sward length, for whatever reason. We understand this to be the preferred approach in the LBMP [REP4-007].	The Applicant welcomes this confirmation and includes prescriptions on timing of cutting at sections 6.4, 7.4, 15.4 and the summaries of those sections in Table 2 of the Outline LBMP submitted at Deadline 6 [REP6-005].	Agreed.

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
12	<p><u>Monitoring, triggers and remedial actions</u></p> <p>Natural England's view is that as the HMSG will have a crucial role in advising on the implementation of the habitat management areas, interpreting monitoring results and recommending any remedial actions necessary, it will need to be formally constituted. Terms of reference will be necessary that stipulate, for example, the role of the group, how often it meets, process for reaching decisions and arbitration. Kent Wildlife Trust informally suggested, during a break in the hearing, that an independent chair of the HMSG, for example Swale Borough Council, could be helpful. Natural England would be supportive of this arrangement, though it would clearly need agreement of the Applicant and Swale Borough Council.</p> <p>At the HSMG meeting on 23 August, monitoring and remedial measures were discussed. Natural England agrees that it is difficult to set brent goose or wader numbers as trigger for remedial action in the ARHMA as there are many permutations. For example, if lower than expected numbers of birds use the ARHMA, this may be because there is suitable habitat within the SPA or elsewhere and the birds don't need to use the ARHMA, or it could be because there have been declines in the SPA population as a whole. Natural England's</p>	<p>The Applicant has included section 1.4 on the constitution of the HMSG and its governance (text agreed by Natural England via email on 16/10/2019) in the next version of the Outline LBMP (Revision E) submitted at Deadline 7 which addresses this requirement.</p> <p>The proposals include the suggestion for the host local planning authorities (Kent, Swale, Canterbury) to appoint a chair of the HMSG.</p> <p>The Applicant understands that NE is in agreement with the governance and constitution proposed.</p>	Agreed.

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
	<p>advice is that to ensure no adverse effect on the integrity of the SPA, there should be no net loss of foraging habitat. Therefore, the ARHMA needs to be in the optimal habitat condition for geese and waders to achieve this objective. Hence it follows that it is appropriate to focus on the management of the ARHMA in terms of triggers and remedial action for wintering waterbirds.</p>		
13	<p><u>Triggers and remedial actions for marsh harriers</u></p> <p>The triggers and remedial actions set out at Appendix A, paragraph 55, of the LBMP [REP4-007] relate to actions the Applicant can take within the application site boundary. However, there is a gap in that there is no remedial action in the event that marsh harriers are deterred from using the application site due to the presence of the solar panels.</p> <p>The approach taken by the Applicant has been to maximise the habitat within the solar park site for small mammals as a foraging resource for marsh harriers. This is in line with Natural England advice that the presence of optimal foraging habitat is likely to encourage at least some individual marsh harriers to overcome any reticence about the presence of the panels, such that the overall population will be maintained. This advice has been given by Dr Richard Saunders, Senior Ornithologist for Natural England.</p>	<p>The Applicant provided a written representation to Natural England (Appendix B) on 25 October 2019 on Marsh Harrier which addresses ExA R17.2.4, and demonstrates no adverse impact on integrity of the Swale SPA, regardless of whether or not marsh harrier are displaced from the grassland between the solar PV arrays.</p> <p>Triggers and remedial actions are proposed in the Outline LBMP [REP6-005] (e.g., at section 6.5.3) and give the ability to adapt habitat management prescriptions in the event that usage of the grassland habitats created in the inter-array grasslands isn't as predicted.</p> <p>The next iteration of the outline LBMP (Revision E) also includes measures to adapt habitats within the Application site boundary that are outside the developed area (e.g. in the LGM HMA, lowland meadow grassland areas and AR HMA) for the benefit of marsh harriers, as discussed in the meeting on 28/10/2019 (notes provided as Appendix A to this SoCG).</p>	<p>Agreed. NE's view is that the Applicant's written representation on marsh harriers, addressing ExA R17.2.4, is helpful in demonstrating the areas of foraging habitat with or without excluding marsh harriers from the solar array. NE's position is, therefore, that there is sufficient precaution built into the assumptions in the RIAA [APP-026] such that we can advise that when a formal appropriate assessment is undertaken, the evidence before the Secretary of State is sufficient to support a conclusion of no adverse effect on the integrity of the SPA.</p>

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
	<p>However, as discussed at the last Biodiversity Hearing and at the HMSG meeting on 23 August, there is uncertainty over whether the landscape changes will prevent marsh harriers from accessing the habitat provided. No remedial action is currently set out in the LBMP [REP4-007] to address this eventuality. Natural England's view is that the situation for marsh harriers is different to that for wintering waterbirds, in that even if the habitat is in optimal condition, it might be the presence of the panels that prevent marsh harriers from using that habitat. In order to be certain an adverse effect on the integrity of the SPA will be avoided, there should be both no net loss of foraging habitat and no net loss of foraging opportunities.</p> <p>Judgements in both the European Court of Justice and the UK courts have made it clear that a high level of certainty is required when assessing whether a plan or project is likely to adversely affect the integrity of a European site. The landmark Waddenzee judgement in 2002 ruled that a high level of certainty is required 'where no reasonable scientific doubt remained as to the absence of such effects'.</p> <p>Natural England guidance is that the best that can be achieved is for the competent authority to identify the reasonably foreseeable risks, in light of information that can be realistically obtained and put</p>	<p>In response to ExA R17.2.3 the updated proposals added in Revisions D and E of the Outline LBMP together satisfy Natural England's concerns in this respect.</p>	

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
	<p>in place a legally enforceable framework aimed at preventing the risks. There is always going to be a certain level of uncertainty as we are making a prediction of the reactions of individual birds – there cannot be absolute certainty as the project has not been built yet. Therefore, the assessment of impacts has to be based on expert opinion, which is divided. Where scientific uncertainty is present then a precautionary approach should be adopted. Natural England's engagement in the Examination and through the HMSG has been to try and resolve the uncertainty as far as possible.</p>		
14	<p><u>Water level control</u></p> <p>Natural England is content that the LBMP [REP4-007] contains sufficient information on water control and structures within the solar park site. However, we would wish to see SSSI enhancement measures in the next version, including water level management and creation of scrapes or other surface water features.</p>	<p>The Applicant welcomes this confirmation and included the measures discussed at section 13.3.2.4 of the Outline LBMP submitted at Deadline 6 [REP6-005].</p> <p>Appendix K of the Outline LBMP includes the measures within the SSSI that were requested.</p>	Agreed.
15	<p><u>Current position on adverse effects on integrity</u></p> <p>Natural England is content that the updated CNMP and BBPP contain sufficient mitigation measures to avoid an adverse effect on the integrity of The Swale SPA/Ramsar from construction</p>	<p>The Applicant has concluded no adverse impact on integrity of the Swale SPA / Ramsar during construction and operation.</p> <p>The residual uncertainty referred to has been addressed by the written representation on Marsh Harrier (Appendix B), which demonstrates no adverse impact on integrity of the Swale SPA, regardless of</p>	Agreed that the additional submissions on marsh harriers, constitution of the HMSG and SSSI measures resolve Natural England's remaining concerns regarding impacts on the SPA, such that there are no outstanding issues.

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
	<p>disturbance. We are also content that the CEMP [REP3-006] contains sufficient mitigation to avoid an adverse effect on integrity from other construction impacts, including dust and water quality.</p> <p>In terms of operational impacts, subject to the updates to the LBMP discussed at the hearing, Natural England is satisfied that the AR HMA is sufficient to avoid an adverse effect on the integrity of the SPA/Ramsar for brent geese. The further work on the LBMP is required to secure the constitution and status of the HMSG.</p> <p>Natural England has previously raised a number of uncertainties surrounding the sufficiency of the ARHMA for lapwings and golden plovers. Our view is that as there has been confirmation that the lapwing and golden plover-days can be combined, giving a requirement of around 33ha for both species, the provision of 51ha is sufficiently precautionary to overcome the uncertainties (as described in our answer to ExQ.2.1.12). In addition, the recommendation of the HMSG on 23 August was to provide open water in a scrape on the adjacent SSSI land, to attract the waders to the site, and make it more likely that they use the ARHMA for foraging. Subject to this being added to the LBMP along with further detail on the constitution of the HMSG, Natural England is satisfied that an adverse effect</p>	<p>whether or not marsh harrier are displaced from the grassland between the solar PV arrays.</p> <p>On the basis of this conclusion of no adverse effect on integrity, it is not necessary to provide mechanisms for further off-site remedial measures.</p> <p>The constitution of the HMSG is secured by the agreed wording (text agreed by Natural England via email on 16/10/2019) inserted into the Outline LBMP (Revision E) to be submitted at Deadline 7.</p> <p>Appendix K of the Outline LBMP [REP6-005] includes the measures within the SSSI that were requested.</p>	

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
	<p>on the integrity of the SPA/Ramsar for lapwings and golden plovers will be avoided.</p> <p>Natural England's view is that there is still some remaining uncertainty surrounding the use of the application site by marsh harriers, such that it has not yet been established, beyond reasonable scientific doubt, that there will not be an adverse effect on the integrity of the site for marsh harriers.</p> <p>We will continue to work with the Applicant and the HMSG to resolve this issue.</p>		
16	<p><u>Impact on The Swale Estuary Marine Conservation Zone (MCZ)</u></p> <p>Natural England is satisfied that the CEMP [REP3-006] and deemed Marine Licence avoid water quality impacts on the Swale Estuary MCZ.</p>	The Applicant welcomes this confirmation.	No comment required.
17	<p><u>Provision of offsite mitigation</u></p> <p>In previous submissions, Natural England had suggested that provision of offsite mitigation might be appropriate in the face of uncertainties around lapwings and golden plovers. This was to overcome the fact that the bird-days calculations indicated an under-provision for lapwings but over-provision for golden plover. As there is now confirmation that the bird-days can be combined, Natural England's view is that off-site provision is not necessary for</p>	<p>The residual uncertainty referred to has been addressed by the written representation on Marsh Harrier (Appendix B) and the agreed position of no adverse impact on integrity of the Swale SPA, even if marsh harrier were displaced from the areas between the solar PV arrays.</p> <p>Given the agreed conclusion of no adverse effect on integrity, there is therefore no requirement for provision of off-site mitigation.</p>	<p>The written representation on marsh harrier is helpful in demonstrating the areas of foraging habitat with or without excluding marsh harriers from the solar array. Therefore, our view is that off-site mitigation is not necessary, and the remedial actions in the Deadline 6 version of the Outline LBMP [REP6-005] are sufficient. At the meeting between the Applicant and NE on 28/10/19, potential additional remedial measures outside the developed area were discussed (habitat management for marsh harriers in the AR HMA and FGM HMA could be considered provided they don't conflict with the other management aims) and are expected to be included in the Deadline 7 version of</p>

Ref.	Statement	Applicant's Comment	Status (NE to complete / Update)
	<p>lapwings and golden plovers. However, off-site habitat creation could be a way of resolving the uncertainty surrounding marsh harriers.</p> <p>In the case of the Kemsley Sustainable Energy Plant, precautionary mitigation was provided for marsh harriers in the form of reedbed creation on Sheppey at Harty Marshes. This was due to concerns that the breeding pair that used the adjacent reedbed would be displaced by construction activity. However, in this case, Natural England cannot give a figure for the amount of habitat that might be necessary.</p>		<p>the Outline LBMP (Revision E), NE's position is, therefore, that there is sufficient precaution built into the assumptions in the RIAA [APP-026] such that we can advise that when a formal appropriate assessment is undertaken, the evidence before the Secretary of State is sufficient to support a conclusion of no adverse effect on the integrity of the SPA.</p>

APPENDIX A - MEETING NOTES (28/10/2019)



Meeting Notes

Project: Cleve Hill Solar Park

Type: Natural England Meeting

Date: Monday 28 October 2019

Time: 12.30pm – 1:45pm

Location: Natural England Office, International House, 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] – RPS Group
Mike Bird [MB] – Arcus Consultancy Services Ltd
Gary McGovern - Pinsent Masons (via telephone)

Notes:

- **Introduction - Aims and objectives**
- SMcC introduced aims of meeting - to reach agreement on all outstanding issues
- **Project status update and timescales**
- MB set out the current project status, recent examination milestones and next milestones:
 - RIES / Rule 17 Letter published Wed 23 October
 - Deadline 7 - Wednesday 13 November 2019
 - End of Examination - Friday 29 November 2019
- MB emphasised that although docs were required by DL7, prior agreement is required to inform respective responses, therefore the Applicant will push for earlier production of supporting documentation
- **Agreement on Residual Issues**
- MA set out the premise for the marsh harrier note circulated on Friday 25 October, which considers whether there would be an adverse effect on integrity (AEOI) of the Swale SPA in the event that the worst case assumptions set out in some of the submissions to the examination by other interested parties were hypothetically borne out.
- Responding to a query from AG, MA clarified that salt marsh habitats were included in both calculations in paragraphs 20 and 21. Agreed this will be added to the note.
- AG set out that if marsh harrier continue to use the site, the habitats will be much better for



them. However, if one assumes the change is enough to prevent their use, AG/PH felt that the percentages quoted in the marsh harrier note of potentially lost foraging habitat (paras 20 and 21) were small and not of concern.

- AG had consulted Richard Saunders (RS) prior to the meeting who advised that there was enough precaution in the assessment to demonstrate that there would be no AEOI of the SPA in the worst case scenario. In short, Natural England agree, with the Marsh Harrier note, that the percentage of habitat around the SPA potentially affected is small, the marsh harrier are currently successful in the SPA with lots of habitat available, but even if there was a loss, the loss at the level set out in the note would not constitute an AEOI.
- AG asked where the monitoring and adaptive management measures are set out in the Outline LBMP. MB provided references to section 6.5.2 and 6.5.3 of the Outline LBMP [REP6-005] and read out the relevant sections
- Responding to a query from AG/PH, MA agreed that remedial measures to enhance conditions for marsh harrier could also be implemented in areas within the site boundary that are outside the inter-array grasslands (e.g. lowland meadow grassland areas).
- The parties agreed the LBMP need not be overly prescriptive as there was flexibility and adaptive management integrated into the LBMP approach, with the HMSG involved in decision making on refinements, subject to constraints dictated by conflicting interests where management may be required for other species (e.g., Arable Reversion Habitat Management Area).
- PH / AG advised that the structure of the LBMP and HMSG governance is helpful in addressing the adaptive management requirement in a clear, structured way.
- AG set out that Natural England has considered all submissions by other natural conservation organisations and interested parties, with the final position of agreement based on the interrogation of all information provided.
- All, welcomed the position of agreement reached.
- GMcG summarised, and reiterated that the marsh harrier note produced sets out that even if the marsh harrier are dissuaded from using the site, there is no adverse effect on the integrity of the Swale SPA.
- AG - agreed, but with the additional confidence that there is monitoring and remedial measures proposed to address the issue if they are dissuaded.
- All - agreed the format for documenting agreement is via the SoCG, supported by the note on Marsh Harrier, and with the RIES comments, Rule 17 question responses cross referencing to those two documents.
- MB - to progress SOCG for issue to NE on Tuesday 29 October 2019. The SOCG will update existing points of agreement that required finalising in the DL4 version [REP4-039] use the most recent Natural England submission [REP5-050] to document agreements reached across all issues.
- MB – to issue a meeting note on Tuesday 29 October 2019.



- SM – enquired on timings of getting both the SoCG and meeting note formally agreed?
- AG – said she was off tomorrow (Tuesday) but would read both the SoCG and meeting note on Wednesday: Alison said she couldn't get into her manager's calendar who would sign off the SoCG. She believed he returned on Monday 4th November and would confirm; AG and PH said they could sign the meeting note off on Wednesday.
- AG - agreed that all other points raised in Rule 17 and RIES had been addressed in previous submissions or by the marsh harrier note.

APPENDIX B - MARSH HARRIER WRITTEN REPRESENTATION (VERSION ISSUED TO NATURAL ENGLAND ONLY ON 25 OCTOBER 2019)



CLEVE HILL SOLAR PARK

**ADDITIONAL SUBMISSION - WRITTEN REPRESENTATION BY THE
APPLICANT ON THE SWALE SPA - MARSH HARRIER**

October 2019
Revision A

Submitted: To Natural England Only

www.clevehillsolar.com



CLEVE HILL
SOLAR PARK

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1 INTRODUCTION

1. This document forms a written representation (WR) by Cleve Hill Solar Park Ltd ("the Applicant") in relation to the Development Consent Order ("DCO") application process for Nationally Significant Infrastructure Projects ("NSIPs") in support of its application for a DCO for the Cleve Hill Solar Park ("the Development"). This document has been prepared on behalf of the Applicant by RPS Group.

2. The Examining Authority published its Rule 17 letter on 23 October 2019 with requests for further information to the Examination. R17.2.4 of the letter requests:

"Using the context of the marsh harrier foraging habitat currently available within the Swale SPA designation together with the recognised functionally linked foraging habitat available to the Swale SPA population, can the Applicant provide two estimates of the proportion of the total foraging habitat that would be lost or affected to such an extent that it would effectively become unavailable as a result of the Proposed Development?"

The first estimate should assume that the Applicant's conclusion that the corridors of reedbed and grassland habitat between the solar array fields will be used post-construction by marsh harriers is correct. The second estimate should assume that marsh harriers do not use the corridors of reedbed and grassland habitat between the solar array fields post-construction for behavioural reasons, as postulated by some IPs.

Assumptions made regarding the suitability of the existing arable land that will be lost to the Proposed Development as favoured foraging habitat for marsh harrier should be clearly described and justified. Any assumptions about the current and predicted future use of the reedbeds and wetland habitats immediately to the south of the existing coastal defences by foraging marsh harriers should also be clear and justified.

Please can these estimates be communicated to Natural England and Kent Wildlife Trust sufficiently in advance of Deadline 7 to allow them to provide the ExA with a response to the following question (R17.2.5)?"

3. There has been some residual disagreement regarding the impact of the Development on marsh harrier associated with the Swale Special Protection Area (SPA). The Applicant believes it would assist Natural England, Kent Wildlife Trust (KWT) and the Examining Authority to set out the Applicant's position in this document and to provide the additional information requested in R17.2.4. This WR is submitted in advance of Deadline 7 so that Natural England and KWT can provide their responses to R17.2.5 by Deadline 7.

2 BACKGROUND

4. The area comprising the built parts of the Development, including the solar PV arrays and electrical compound occupies land that has been identified as functionally linked to The Swale SPA; i.e., it is an area of land outside the boundary of the European Site that is used by its qualifying features, but does not occupy any habitat within the European Site.

5. The Swale SPA is designated for its important assemblages of wintering waterfowl and notable breeding bird populations: the SPA citation (1993) states that the site "*qualifies under Article 4.2 by virtue of regularly supporting diverse assemblages of the wintering and breeding migratory waterfowl of lowland wet grassland and other estuarine habitats*".

6. The 1993 SPA citation does not list marsh harrier as a qualifying interest or breeding assemblage species. It is not a species or assemblage feature for which the site has been classified. With regard to the qualifying interest features, the marsh harrier is included in the assessment (ES chapter 10: Ornithology [APP-039] and RIAA [APP-026])

- as part of the breeding bird assemblage feature of the SPA, as it is considered to be a species characteristic of the SPA grazing marsh habitat, as advised by Natural England in pre-submission consultation.
7. Natural England Conservation Advice for Marine Protected Areas provides information on the status, features and objectives for those designated sites. For The Swale SPA¹:
"The Swale SPA's conservation objectives apply to the site and the individual species and/or assemblage of species for which the site has been classified.
 8. *The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:*
 - *the extent and distribution of the habitats of the qualifying features;*
 - *the structure and function of the habitats of the qualifying features;*
 - *the supporting processes on which the habitats of the qualifying features rely;*
 - *the populations of each of the qualifying features; and*
 - *the distribution of qualifying features within the site."*
 9. Natural England also provide Supplementary Advice on Conservation Objectives (SACOs) which provides feature targets for the qualifying interest features of the SPA. For the breeding bird assemblage, these include maintenance of the size and diversity of the assemblage, reducing human disturbance, restricting predation and disturbance by native and non-native predators and maintaining various aspects of the supporting habitat within and outside the SPA. The full SACOs text from Natural England is provided in Appendix 1.
 10. An interested party, Bob Gomes, has provided written representation to the Examination which included a brief history of the status of marsh harriers locally and in Kent. This indicated that there were 5 pairs in Kent (on Sheppey) in 1991, increasing to 14 by 1994 and 21-24 by 1997. The JNCC 2001 SPA Review lists marsh harrier at The Swale SPA as having a population of 24 pairs of marsh harrier (Count as of 1995), representing 15.0% of the breeding population in Great Britain. A national survey in 2005 revealed an estimated 55 nests in Kent. The latest Kent Breeding Bird Atlas 2008-13² indicates 80-100 breeding females with 40-50 of these on Sheppey (2008-13), although a later Kent Bird Report³ suggests this is an overestimate and that the population (in 2015) was in the order of no more than 70 breeding females.
 11. On the basis of this information, it is likely that there were between 5 and 14 pairs of marsh harrier within the SPA at the time of the 1993 citation and the population increased since then to at least 24 pairs in 1995. There does not appear to be a more recent population estimate specifically for the SPA; however, Natural England Commissioned Report NECR082 *What do we know about the birds and habitats of the North Kent Marshes* states that of the 55 nests identified in the 2005 survey, 42 were on Sheppey or the South Swale in, or adjoining The Swale SPA. It is therefore clear that there has been a positive trend of breeding marsh harriers in the SPA over the last 25 years, indicating a favourable population status. For the purposes of this WR, it is assumed that the SPA supports between 24-42 pairs of marsh harriers.
 12. Chapter 9: Ornithology of the ES [APP-039] provided information from confidential KWT reports on the local breeding attempts at the Development site: *"Marsh harriers have*

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<https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK9012011&SiteName=the%20swale&countyCode=&responsiblePerson=&HasCA=1&NumMarineSeasonality=2&SiteNameDisplay=The%20Swale%20SPA#hlco>

² Kent Ornithological Society. Available at: <https://kentos.org.uk/kent-breeding-bird-atlas/> [accessed 21/10/2019]

³ Kent Ornithological Society 2016. *Kent Bird Report 2015*. Kent Ornithological Society.

nested in most years between 2004 and 2017 (information from confidential KWT reports) within the Development site, almost always within the KWT reserve [the reedbed and wetland immediately south of the sea wall to the north of the solar PV array fields] and occasionally in reedy ditches or crops close to the reserve. Breeding density was much higher between 2004 and 2012, with breeding attempts by three to eight pairs each year. However, since 2013, there has only been one nesting attempt each year."

13. The assessment of the potential impact of habitat loss/change concluded that the Development would result in a substantial increase in the amount of suitable foraging habitat available to be managed for the benefit of foraging marsh harriers. It was predicted that marsh harriers will continue to forage in the favourable habitat between the arrays, which will be larger in extent following installation of the Development than in the baseline condition. Due to the increased extent of suitable foraging habitat available with the Development, the conservation objectives for the breeding bird assemblage, of which marsh harriers form a part, would not be undermined with respect to the change of habitats for foraging marsh harriers within areas of functionally linked land.

3 NATURAL ENGLAND'S POSITION

14. The most recent submission by Natural England [REP5-050] states:

"Natural England's view is that there is still some remaining uncertainty surrounding the use of the application site by marsh harriers, such that it has not yet been established, beyond reasonable scientific doubt, that there will not be an adverse effect on the integrity of the site for marsh harriers. We will continue to work with the Applicant and the HMSG to resolve this issue."

15. The earlier section of the same submission under "Triggers and Remedial Actions for Marsh Harrier" sets out Natural England's position in greater detail:

"The triggers and remedial actions set out at Appendix A, paragraph 55, of the LBMP [REP4-007] relate to actions the Applicant can take within the application site boundary. However, there is a gap in that there is no remedial action in the event that marsh harriers are deterred from using the application site due to the presence of the solar panels.

*The approach taken by the Applicant has been to maximise the habitat within the solar park site for small mammals as a foraging resource for marsh harriers. **This is in line with Natural England advice that the presence of optimal foraging habitat is likely to encourage at least some individual marsh harriers to overcome any reticence about the presence of the panels, such that the overall population will be maintained** [Applicant's emphasis]. This advice has been given by Dr Richard Saunders, Senior Ornithologist for Natural England.*

However, as discussed at the last Biodiversity Hearing and at the HMSG meeting on 23 August, there is uncertainty over whether the landscape changes will prevent marsh harriers from accessing the habitat provided. No remedial action is currently set out in the LBMP [REP4-007] to address this eventuality. Natural England's view is that the situation for marsh harriers is different to that for wintering waterbirds, in that even if the habitat is in optimal condition, it might be the presence of the panels that prevent marsh harriers from using that habitat. In order to be certain an adverse effect on the integrity of the SPA will be avoided, there should be both no net loss of foraging habitat and no net loss of foraging opportunities.

Judgements in both the European Court of Justice and the UK courts have made it clear that a high level of certainty is required when assessing whether a plan or project is likely to adversely affect the integrity of a European site. The landmark

Waddenzee judgement in 2002 ruled that a high level of certainty is required 'where no reasonable scientific doubt remained as to the absence of such effects'.

Natural England guidance is that the best that can be achieved is for the competent authority to identify the reasonably foreseeable risks, in light of information that can be realistically obtained and put in place a legally enforceable framework aimed at preventing the risks. There is always going to be a certain level of uncertainty as we are making a prediction of the reactions of individual birds – there cannot be absolute certainty as the project has not been built yet. Therefore, the assessment of impacts has to be based on expert opinion, which is divided. Where scientific uncertainty is present then a precautionary approach should be adopted. Natural England's engagement in the Examination and through the HMSG has been to try and resolve the uncertainty as far as possible."

4 THE APPLICANT'S POSITION

16. It is the Applicant's position that the habitat management measures with the Development will provide suitable foraging habitat for marsh harriers, which is agreed with conservation parties⁴. It is also the Applicant's position that marsh harriers from the SPA and outside the SPA will continue to forage there, including between the solar PV array fields, which was agreed by Natural England's senior ornithological advisor during a meeting on 3 September 2018 (see page 62 of 63 of the Pre-Submission Statement of Common Ground between the Applicant and Natural England [APP-256]). The assessment in the Environmental Statement (ES) [APP-039] concluded that this would have a potentially positive effect but was unlikely to be significant. The RIAA [APP-026] concluded that due to the increased extent of suitable foraging habitat available with the Development, the conservation objectives would not be undermined with respect to the change of habitats for foraging marsh harriers in functionally linked land. The Outline LBMP (REP6-005) sets out the habitat management measures for the grassland areas between the solar arrays for the benefit of foraging marsh harriers and provides examples of remedial measures to alter the habitat management if the target habitats are not achieved, or marsh harriers are not observed using them. No robust evidence has been provided to suggest marsh harriers won't continue to use the developed site. The Applicant's position has not therefore changed during the course of the Examination.
17. As recognised by Natural England, the law requires consideration of best available evidence, but the requirement to reach conclusions beyond reasonable scientific doubt does not require removal of all uncertainty. However, to provide additional comfort, in this document, we provide additional information to put any contended residual uncertainty regarding the future use of the inter-array grassland areas between the fields containing the solar PV arrays in the operational Development site into proper context with respect to the implications for the conservation objectives of the SPA.
18. The Development envelope includes approximately 285 hectares of arable land representing the envelope around all of the fields that will contain the solar PV arrays and the electrical compound (including flood protection bund). This land within the Development envelope has been acknowledged in the assessment as providing functionally linked land with respect to foraging marsh harriers. This represents the potential maximum area from which marsh harriers could be displaced from foraging *if* they are dissuaded from foraging in the inter-array grasslands between the fields containing the solar PV arrays. There is no empirical evidence that birds would be

⁴ KWT Written Representation REP2-092, Paragraph 18; Natural England Written Summary of Oral Submission REP3-082, page 3 'Marsh Harriers'; Natural England SoCG REP4-039, pages 16 and 41; Natural England Written Summary of Oral Representation presented at ISH6 REP5-050, Page 3 'Triggers and remedial actions for marsh harriers'.

displaced from the South Swale Nature Reserve bordering the north of the Development site (the reedbeds and wetland habitats immediately to the south of the existing coastal defence), nor that they would be displaced from foraging in other areas outside the development envelope, such as within the 55.5 ha Arable Reversion Habitat Management Area (AR HMA), 13.3 ha Lowland Grassland Meadow Habitat Management Area (LGM HMA) or 19.1 ha of other lowland meadow grassland habitat management outside the development envelope. Those areas will provide more suitable grassland habitat for foraging than in the current arable baseline and provide a positive net gain in suitable grassland foraging habitat. This is supported by the observation referred to in the assessment of a marsh harrier foraging along the edge of a solar farm on Sheppey; also, at the sustainable energy plant development at Kemsley Paper Mill, a reedbed near the access track (within 100 m) subject to frequent haulage disturbance has continued to support nesting marsh harriers⁵.

19. The Swale SPA extends over a total of 6,509.88 ha. The SPA's 2016 Standard Data Form provides an estimated breakdown of different habitats within the SPA. Those comprising suitable marsh harrier foraging habitat include 915 ha of saltmarsh and 2,512 ha of coastal grazing marsh. There is therefore approximately 3,427 ha of suitable foraging habitat within the SPA itself. Outside the SPA, the availability of other suitable (e.g. reedbed, grazing marsh and other wetland) and sub-optimal (e.g. arable land) foraging habitat for breeding marsh harriers from the SPA has not been fully quantified, but is substantial, particularly on Sheppey, where Eastchurch, Leysdown and Harty Marshes for example extend over approximately 2,000 ha. It is estimated that there are at least 2,500 ha of other available arable and grassland foraging habitat outside the SPA.
20. If it is assumed [per R17.2.4] that marsh harrier are displaced from the areas between solar panels within arrays, but are not dissuaded from foraging in the inter-array grasslands between the fields containing the solar PV arrays (which is the basis of the Applicant's position), then there is effective loss of 258 ha of arable cropped habitat available to them for foraging. In the context of the total available foraging habitat in and around the SPA, this represents 4.4%. However, marsh harriers were observed during baseline surveys mainly foraging along the ditches between fields and in the reedbed and grassland habitat comprising the KWT reserve along the northern boundary; this habitat would still be available to marsh harriers under this scenario and the loss of sub-optimal arable land is mitigated in the design of the Development by the enhancement of 27 ha of inter-array grasslands to provide optimal foraging conditions for marsh harriers, together with better foraging habitat being developed in the 55.5 ha AR HMA (during the breeding season)⁶, the 13.3 ha LGM HMA and 19.1 ha of other peripheral lowland meadow grassland development around the periphery of the development envelope in place of arable crops. As such, the range available for foraging marsh harriers is not reduced with the Development.
21. If it is assumed [per R17.2.4] that marsh harrier are dissuaded from foraging in the inter-array grasslands between the fields containing the solar PV arrays, the potential loss of 285 ha of arable foraging habitat including its ditch network and associated 2 m grassland strips at the Development site (assuming marsh harriers are displaced entirely from the developed envelope at the site as described above) is therefore likely to represent a small area in relative terms, being less than 5% of the potential foraging habitat of all types (saltmarsh, grazing marsh grassland and arable habitat within and outside the SPA) available to marsh harriers from the SPA population. If the same proportion is applied directly to the SPA marsh harrier population and if arable foraging

⁵ RPS 2017. Sustainable Energy Plant, Kemsley Paper Mill, Sittingbourne, Kent: Information for an Appropriate Assessment. https://wtikemsley.co.uk/site/assets/files/1376/appendix_6_8.pdf accessed 24/10/2019.

⁶ The AR HMA in the breeding season will be grazed but is likely to support ground nesting birds and small mammals, but in the winter will be short sward and less suitable as foraging habitat.

- habitat is a potentially limiting factor in their survival or productivity, then in that assumed scenario there would be effective loss of 1-2 pairs from the SPA population (5% of 24-42 pairs).
22. If such an impact were assumed to occur (which, as noted above, the Applicant considers unlikely), then the question is whether or not this represents an adverse effect on the integrity of the SPA. In terms of abundance, Natural England's SACOs state that the breeding bird assemblage, of which marsh harrier forms a part, should be maintained at a level above the baseline set by the Natural England Chief Scientist. The target-value given for the population size of this feature is considered to be the minimum standard for conservation/restoration measures to achieve. The Applicant was unable to find a specific target value for the SPA marsh harrier population and Natural England has not provided specific advice in this respect. However, given the material increase in the SPA marsh harrier breeding population since the SPA citation in 1993, a small decrease of one or two pairs of marsh harrier supported by the SPA (from an estimated 24-42 pairs to 22-40 pairs if this scenario were to occur) would not undermine the conservation objective for the breeding bird assemblage. In the Applicant's opinion, the remaining area of foraging habitat at and around the SPA, including the enhanced habitats provided at the site that remain undeveloped, will maintain a population which continues to achieve the SPA's conservation aims – the SPA would continue to support a robust population of marsh harriers that contributes to the breeding bird assemblage feature.
23. The SACOs list disturbance caused by human activity as an attribute, with a target of reducing the frequency, duration and / or intensity of disturbance affecting roosting, nesting, foraging, feeding, moulting and/or loafing birds so that they are not significantly disturbed. In the unlikely event that marsh harriers were to be displaced from the Development envelope and thus not make use of the inter-array grasslands between fields of solar panels, that scenario would constitute a level of disturbance because it would change local distribution on a continuing basis. However, even in that scenario the potential loss of an area of sub-optimal arable foraging habitat outside the SPA boundary would not affect the long-term viability of the SPA population. In a worst-case, the population could be slightly reduced, but would continue to contribute to a viable local, national and bio-geographic population.
24. With regards to the supporting habitat, the SACOs list two Attributes and Targets of key relevance in relation to the Development: maintaining the extent, distribution and availability of suitable habitat (either within or outside the Development site boundary) which supports the feature for all necessary stages of its breeding cycle; and maintaining the structure, function and availability of the habitats which support the assemblage feature for all stages of the breeding period. The SACO lists the supporting habitats as intertidal mud, intertidal sand and muddy sand, intertidal coarse sediment, intertidal mixed sediment, saltmarsh, coastal grazing marsh.
25. There is no specific mention of arable land as supporting habitat in the SACO. Natural England has highlighted that the Cleve Hill site, which is predominantly arable, provides functionally linked land for marsh harriers; the Applicant agrees that there is a functional link, though the fact that arable land is not identified as supporting habitat in the SACO is nonetheless considered to be significant as it suggests lesser importance. As a result, the Applicant has committed to managing areas of the site for the benefit of marsh harriers, specifically the estimated 27 ha of inter-array grasslands between the solar PV arrays in each field that improves upon the current narrow ditch margins at the edges of the arable crops. In these areas, arable land will be converted to coastal grazing marsh grassland, thus increasing the extent of this supporting habitat in relation to the SPA. In other areas outside the Development envelope within the Development site boundary, arable land will be converted to grassland in the AR HMA

and LGM HMA and other lowland meadow grassland areas, which will benefit foraging marsh harriers, but is not the specific aim of the management of those areas.

26. None of the other target features for the SPA would be affected with regards to marsh harriers in the breeding bird assemblage:
- Breeding bird assemblage species diversity will be maintained;
 - Risk of predation will remain unaffected;
 - Air quality for supporting habitat will be unaffected;
 - Conservation measures for supporting habitat will be unaffected; and
 - Water quality in supporting habitat will be improved due to cessation of agricultural inputs to arable land.

5 CONCLUSIONS

27. This WR sets out clarification of the Applicant's position regarding the potential effects of the Development on the integrity of The Swale SPA with respect to marsh harriers, which are part of the breeding bird assemblage feature of the SPA. The WR provides the information requested in R17.2.4 of the Examining Authority's Rule 17 letter.
28. The Applicant concludes that:
- The breeding bird assemblage feature of the SPA includes marsh harrier as a component species of the assemblage because it is a species characteristic of grazing marsh, although it is not listed in the SPA citation;
 - The development envelope comprising the solar array fields and electrical compound is not within The Swale SPA, it is within functionally linked land with respect to foraging marsh harriers;
 - The SPA population of marsh harriers has increased considerably since citation to at least 24-42 breeding females and is in favourable conservation status;
 - Marsh harriers forage for some of the time over arable land at the site, but the focus of foraging activity was along the ditches and mainly along the KWT reserve along the northern boundary of the site, which will not be developed;
 - Marsh harriers are likely to continue to forage at the operational Development, making use of the grassland habitats within the Development site boundary that are outside the development envelope around all of the solar array fields, as well as the inter-array grassland areas between the solar array fields;
 - In the context of the contended residual uncertainty regarding future use of the inter-array grassland areas, the extent of arable land being developed on site is a very small proportion of the amount of saltmarsh, grassland and arable habitat in and around the SPA that is available to the SPA marsh harrier population;
 - Design mitigation plus adaptive management measures reduce residual uncertainty regarding foraging use of the operational site to an acceptable level;
 - The Habitats Regulations requires consideration of the best available evidence, which has been presented in the Examination, but does not require removal of all uncertainty. There is no robust evidence to conclude that marsh harriers will not use the operational site;
 - In view of the above, it can reasonably be concluded, beyond reasonable scientific doubt, that there will be no adverse effect on the integrity of The Swale SPA, nor any requirement for any further mitigation to make this conclusion in respect of marsh harrier as a component of the breeding bird assemblage. Regarding offsite mitigation land, that is not necessary, particularly given the existing c.6,000 ha of potential foraging habitat available in and around the SPA.

APPENDIX 1

<p>Breeding bird assemblage. Breeding</p>	<p>Assemblage of species: abundance</p>	<p>Maintain the size of the assemblage at a level which is above a baseline population approved by Natural England Chief Scientist, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.</p>	<p>Breeding (summer) season</p>	<p>This will sustain the site's overall assemblage and contribute to a viable local, national and bio-geographic population. Due to the mobility of this feature and the dynamic nature of population change, the target-value given for the population size of this feature is considered to be the minimum standard for conservation/restoration measures to achieve. This minimum-value may be revised where there is evidence to show that a population's size has significantly changed as a result of natural factors or management measures and has been stable at or above a new level over a considerable period (generally at least 10 years). The values given here may also be updated in future to reflect any strategic objectives which may be set at a national level for this feature. Given the likely fluctuations in numbers over time, any impact-assessments should focus on the current size of the site's population, as derived from the latest known or estimated level established using the best available data. This advice accords with the obligation to avoid deterioration of the site or significant disturbance of the species for which the site is classified, and seeks to avoid plans or projects that may affect the site giving rise to the risk of deterioration. Similarly, where there is evidence to show that a feature has historically been more abundant than the stated minimum target and its current level, the ongoing capacity of the site to accommodate the feature at such higher levels in future should also be taken into account. Unless otherwise stated, the population size will be that measured using standard methods such as peak mean counts or breeding surveys. This value is also provided recognising there will be inherent variability as a result of natural fluctuations and margins of error during data collection. Whilst we will endeavour to keep these values as up to date as possible, local Natural England staff can advise that the figures stated are the best available.</p> <p>Site-specifics:</p> <p>The target has been set due to a lack of evidence that the feature is being impacted by any anthropogenic</p>
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<p>Breeding bird assemblage, Breeding</p>	<p>Assemblage of species: diversity</p>	<p>Maintain the overall number of the main assemblage-component species and the average size of each of their populations in order to achieve a high degree of species diversity within the seabird assemblage.</p>	<p>Breeding (summer) season</p>	<p>activities.</p> <p>The overall variety or diversity of different species which make up the assemblage is an important attribute of the assemblage feature. This diversity is a product of both species richness (the overall number of different species represented in the assemblage) and the abundance of those species within the assemblage. Maintaining this overall diversity is considered an important element of achieving the SPA Conservation Objective.</p> <p>Site-specifics: At the time of classification the assemblage included shelduck (<i>Tadorna tadorna</i>), mallard (<i>Anas platyrhynchos</i>), moorhen (<i>Gallinula chloropus</i>), coot (<i>Fulica atra</i>), lapwing (<i>Vanellus vanellus</i>), redshank (<i>Tringa totanus</i>), reed warbler (<i>Acrocephalus scirpaceus</i>) and reed bunting (<i>Emberiza schoeniclus</i>) (English Nature, 1993).</p> <p>The target has been set due to a lack of evidence that the feature is being impacted by any anthropogenic activities.</p>
<p>Breeding bird assemblage, Breeding</p>	<p>Disturbance caused by human activity</p>	<p>Reduce the frequency, duration and / or intensity of disturbance affecting roosting, nesting, foraging, feeding, moulting and/or loafing birds so that they are not significantly disturbed.</p>	<p>Breeding (summer) season</p>	<p>The nature, scale, timing and duration of some human activities can result in bird disturbance (defined as any human-induced activity sufficient to disrupt normal behaviours and / or distribution of birds in the absence of the activity) at a level that may substantially affect their behaviour, and consequently affect the long-term viability of the population. Such disturbing effects can for example result in changes to feeding or roosting behaviour, increases in energy expenditure due to increased flight, abandonment of nest sites and desertion of supporting habitat (both within or outside the designated site boundary where appropriate). This may undermine successful nesting, rearing, feeding and/or roosting, and/or may reduce the availability of suitable habitat as birds are displaced and their distribution within the site contracts. Disturbance associated with human activity may take a variety of forms including noise, light, sound, vibration, trampling, presence of people, animals and structures.</p> <p>'Significant' disturbance is defined by AEW (The Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA), 2016):</p> <p>"Disturbance should be judged as</p>

				<p>significant if an action (alone or in combination with other effects) impacts on (water)birds in such a way as to be likely to cause impacts on populations of a species through either changed local distribution on a continuing basis; and/or changed local abundance on a sustained basis; and/or the reduction of ability of any significant group of birds to survive, breed, or rear their young.” (Fox and Madsen, 1997)</p> <p>Site-specifics: Disturbance has been identified as a potential cause of the decline in bird numbers across North Kent. Birds have been shown to change their behaviour in response to disturbance in local studies of the Swale, although these studies focused on the winter period. This includes flying more than 50m and major flight events as a result of being disturbed. Activities on the intertidal, especially involving dogs have been shown to be of particular concern. Disturbance has been shown to have more of an affect at high tide. (Liley and Fernley, 2011); (English Nature, 2003); (Liley et al., 2012); (Kirby, 2013)</p> <p>Set based on north Kent bird disturbance surveys, which have found evidence to suggest human activities such as dog walking provide a source of disturbance to the birds using the site.</p>
Breeding bird assemblage, Breeding	Predation - all habitats	Restrict predation and disturbance caused by native and non-native predators.	Breeding (summer) season	<p>This will ensure that breeding productivity (number of chicks per pair) and survival are sustained at rates that maintain or restore the abundance of the feature. Impacts to breeding productivity can result directly from predation of eggs, chicks, juveniles and adults, but also from significant disturbance. The presence of predators can influence bird behaviours, such as abandonment of nest sites or reduction of effective feeding. Where evidence suggests predator management is required, measures can include their exclusion through fencing, scaring and direct control. Any such measures must consider the legal protection of some predators, as well as the likely effects of such control on other qualifying features. Predation can influence distribution on a local scale (e.g. through abandonment) or at a wider population scale. (Smith et al., 2010), (Smith et al.,</p>

				<p>2011)</p> <p>Site-specifics:</p> <p>The target has been set due to a lack of evidence that the feature is being impacted by any anthropogenic activities.</p>
<p>Breeding bird assemblage, Breeding</p>	<p>Supporting habitat: air quality</p>	<p>Maintain concentrations and deposition of air pollutants at below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System</p>	<p>Year round – to ensure the habitat remains suitable for when the feature is present</p>	<p>This target has been included because the structure and function of habitats which support this SPA feature may be sensitive to changes in air quality. Exceeding critical values for air pollutants may result in changes to the chemical status of its habitat substrate, accelerating or damaging plant growth, altering vegetation structure and composition and thereby affecting the quality and availability of nesting, feeding or roosting habitats. Critical Loads and Levels are thresholds below which such harmful effects on sensitive UK habitats will not occur to a noteworthy level, according to current levels of scientific understanding. There are critical levels for ammonia (NH₃), oxides of nitrogen (NO_x) and sulphur dioxide (SO₂), and critical loads for nutrient nitrogen deposition and acid deposition. There are currently no critical loads or levels for other pollutants such as Halogens, Heavy Metals, POPs, VOCs or Dusts. These should be considered as appropriate on a case-by-case basis. Ground level ozone is regionally important as a toxic air pollutant but flux-based critical levels for the protection of semi-natural habitats are still under development. More information about site-relevant Critical Loads and Levels for this site is available by using the 'search by site' tool on the Air Pollution Information System (Centre for Ecology & Hydrology (CEH), 2014).</p> <p>It is recognised that achieving this target may be subject to the development, availability and effectiveness of abatement technology and measures to tackle diffuse air pollution, within realistic timescales.</p> <p>Site-specifics:</p> <p>Critical loads for air pollutants relevant to this feature at this site have been taken from APIS. At the time of drafting this packaging none of the critical loads given below were exceeded on the site.</p> <p>Nitrogen deposition: Pioneer, low-mid, mid-upper saltmarshes: Critical Loads (kg N/ha/yr): 20-30</p> <p>Ammonia : Littoral sediment: Critical</p>

				<p>Level ($\mu\text{g NH}_3/\text{m}^3$ annual mean): 3 (2-4 $\mu\text{g NH}_3 \text{ m}^{-3}$) (set for Higher Plants) Nox: Littoral sediment: Critical Level ($\mu\text{g Nox}/\text{m}^3$ annual mean): 30 (set for all vegetation). Critical Level ($\mu\text{g Nox}/\text{m}^3$ 24-hour mean): 75 (set for all vegetation)</p> <p>There is evidence from survey or monitoring that shows the feature to be in a good condition and/or currently un-impacted by anthropogenic activities.</p>
<p>Breeding bird assemblage. Breeding</p>	<p>Supporting habitat: conservation measures</p>	<p>Maintain the structure, function and supporting processes associated with the feature and its supporting habitat through management or other measures (whether within and/or outside the site boundary as appropriate) and ensure these measures are not being undermined or compromised.</p>	<p>Year round – to ensure the habitat remains suitable for when the feature is present</p>	<p>This target has been included because active and ongoing conservation management is often needed to protect, maintain or restore this feature at this site. Other measures may also be required, and in some cases, these measures may apply to areas outside of the designated site boundary in order to achieve this target. Further details about the necessary conservation measures for this site can be provided by Natural England. This information will typically be found within, where applicable, supporting documents such as Natura 2000 Site Improvement Plan, Site Management Strategies or Plans, the Views about Management Statement for the underpinning SSSI and / or management agreements.</p> <p>Site-specifics: This target has been included because active and ongoing conservation management is often needed to protect, maintain or restore this feature at this site. Other measures may also be required, and in some cases, these measures may apply to areas outside of the designated site boundary in order to achieve this target. Further information can be found within the Natura 2000 Site Improvement Plan for SPAs within the Greater Thames Complex (Thames Estuary and Marshes SPA, Medway Estuary and Marshes SPA and the Swale SPA and Benfleet and Southend Marshes SPA). For more information on management of the SSSIs that underpin the SPA please contact your local Natural England adviser (Natural England, 2014).</p> <p>There is evidence from survey or monitoring that shows the feature to be in a good condition and/or currently un-impacted by anthropogenic activities.</p>

<p>Breeding bird assemblage Breeding</p>	<p>Supporting habitat: extent and distribution of supporting habitat for the breeding season</p>	<p>Maintain the extent, distribution and availability of suitable habitat (either within or outside the site boundary) which supports the feature for all necessary stages of its breeding cycle (courtship, nesting, feeding) at: Intertidal mud: 2411 ha, Intertidal sand and muddy sand: 0.01 ha, Intertidal coarse sediment (extent unknown), Intertidal mixed sediment (extent unknown), Saltmarsh : 915 ha, Freshwater and coastal grazing marsh : 2512 ha. NB saltmarsh extent may or may not contain the specific saltmarsh habitat types used by the feature.</p>	<p>Year round – to ensure the habitat remains suitable for when the feature is present</p>	<p>The information available on the extent and distribution of supporting habitat used by the feature may be approximate depending to the nature, age and accuracy of data collection. Inappropriate management and direct or indirect impacts which may affect the extent and distribution of habitats may adversely affect the population and alter the distribution of birds. The principal habitats known or likely to support the assemblage feature at this SPA are:</p> <p>Site-specifics: Intertidal mud, intertidal sand and muddy sand, saltmarsh, and grazing marsh. Sea level rise has the potential to change the extent of supporting habitats (erosion and accretion). The shoreline management plan and associated Appropriate Assessment has specific details on the policies in place for specific areas within The Swale (Natural England, 2014), (Environment Agency, 2008). This target may apply to supporting habitat which also lies outside the boundary. Birds will not be nesting on habitat regularly flooded by the tide but they will be found in intertidal habitats above the Mean High Water Mark (which may not have been mapped). Intertidal mud (Hill et al., 1996), (English Nature, 2003), (The Kent Habitat Survey Partnership, 2004), (Natural England, 2010), (England, 2010), (English Nature, 2003), (Natural England, 2013), (Marine Nature Conservation Review, 1993), (National Rivers Authority, 1990), (National Rivers Authority, 1990), (Unknown, .), (Medway and Swale Estuarine Partnership, 2004), (Mott MacDonald Group, 1996); Intertidal sand and muddy sand (Hill et al., 1996), (Mott MacDonald Group, 1996), (Unknown, .), (Medway and Swale Estuarine Partnership, 2004), (Unknown, 2003), (Unknown, 2001); Saltmarsh (England, 2010), (Hill et al., 1996), (Blair-Myers, 2003), (Kent County Council (KCC), 2012); Freshwater and coastal grazing marsh (Unknown, Unknown), (Unknown, .), (The Kent Habitat Survey Partnership, 2003). Natural England, 2014 Natural England, 2014 Natural England, 2013 Kent County Council (KCC), 2012 Brown et al., 2013 Halcrow Group Limited, 2010</p>
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				There is evidence from survey or monitoring that shows the feature to be in a good condition and/or currently un-impacted by anthropogenic activities.
Breeding bird assemblage. Breeding	Supporting habitat: quality of supporting breeding habitats	Maintain the structure, function and availability of the following habitats which support the assemblage feature for all stages (breeding, moulting, roosting, loafing, feeding) of the breeding period; Intertidal mud, intertidal sand and muddy sand, saltmarsh, grazing marsh.	Year round – to ensure the habitat remains suitable for when the feature is present	<p>The site's ability to support and sustain an assemblage comprising a distinct or diverse mix of species will be reliant on the overall quality and diversity of the habitats that support them. The feeding and roosting habitats which support the assemblage will occur within, and in some cases outside, the site boundary. This target is applicable to both circumstances.</p> <p>Due to the large number of species and natural fluctuations in the overall composition of an assemblage, it is not practical to provide specific targets relating to each supporting habitat relevant to the assemblage. Generally speaking, the specific attributes of each supporting habitat may include vegetation characteristics and structure, surface water depth, water quality, air quality, food availability, connectivity between nesting, roosting and feeding areas both within and outside the SPA. Further advice will be provided by Natural England on a case by case basis. The main component-species of the assemblage at this SPA include:</p> <p>Site-specifics: Shelduck (<i>Tadorna tadorna</i>), mallard (<i>Anas platyrhynchos</i>), moorhen (<i>Gallinula chloropus</i>), coot (<i>Fulica atra</i>), lapwing (<i>Vanellus vanellus</i>), redshank (<i>Tringa totanus</i>), reed warbler (<i>Acrocephalus scirpaceus</i>) and reed bunting (<i>Emberiza schoeniclus</i>) (Natural England, 2014).</p> <p>There is evidence from survey or monitoring that shows the feature to be in a good condition and/or currently un-impacted by anthropogenic activities.</p>
Breeding bird assemblage. Breeding	Supporting habitat: water quality - contaminants	Reduce aqueous contaminants to levels equating to Good/High status according to the Water Framework Directive, avoiding deterioration from existing levels.	Year-round	Contaminants may have a range of biological effects on different species within the supporting habitat, depending on the nature of the contaminant (Joint Nature Conservation Committee (JNCC), 2004), (UK Technical Advisory Group on the Water Framework Directive (UKTAG), 2008), (Environment Agency, 2014). This in turn can adversely affect the availability of bird breeding, rearing, feeding and roosting habitats, and potentially bird

				<p>survival.</p> <p>Site-specifics: There are high levels of the priority hazardous substance tributyl tin and its compounds in the Swale Water Framework Directive waterbody.</p> <p>Evidence from monitoring.</p>
<p>Breeding bird assemblage. Breeding</p>	<p>Supporting habitat: water quality - dissolved oxygen</p>	<p>Maintain the dissolved oxygen (DO) concentration at levels equating to High Ecological Status, avoiding deterioration from existing levels.</p>	<p>Year-round</p>	<p>Dissolved Oxygen (DO) levels affect the condition and health of supporting habitats. Excessive nutrients and/or high turbidity can lead to a drop in DO, especially in warmer months. Low DO can have sub-lethal and lethal impacts on fish and infauna and epifauna communities (Best et al., 2007) and hence can adversely affect the availability and suitability of bird breeding, rearing, feeding and roosting habitats. However, there is a significant amount of natural variation that should be considered.</p> <p>Site-specifics: There is evidence from survey or monitoring that shows the feature to be in a good condition and/or currently un-impacted by anthropogenic activities.</p>
<p>Breeding bird assemblage. Breeding</p>	<p>Supporting habitat: water quality - nutrients</p>	<p>Maintain water quality at mean winter dissolved inorganic nitrogen levels where biological indicators of eutrophication (opportunistic macroalgal and phytoplankton blooms) do not affect the integrity of the site and features, avoiding deterioration from existing levels.</p>	<p>Year-round</p>	<p>High concentrations of nutrients in the water column can cause phytoplankton and opportunistic macroalgae blooms, leading to reduced dissolved oxygen availability. This can impact sensitive fish, epifauna and infauna communities (Devlin et al., 2007), (Best, 2014) and hence adversely affect the availability and suitability of bird breeding, rearing, feeding and roosting habitats. The aim is to seek no further deterioration or improve water quality.</p> <p>Site-specifics: The risk of eutrophication across the site has been assessed as low using the Environment Agency's Weight of Evidence approach. This takes into account assessments of the Water Framework Directive opportunistic macroalgae and phytoplankton quality elements using the respective assessment tools. Adverse effects to integrity should be avoided. Therefore opportunistic macroalgal levels should be maintained so there is no adverse effect to the feature through limited algal cover (<15%) and low biomass (< 500 g m²) of macroalgal blooms in the available intertidal habitat, with area of available intertidal habitat</p>

				<p>affected by opportunistic macroalgae less than 15 %. There should also be limited (<5%) entrainment of algae in the underlying sediment (all accounting for seasonal variations and fluctuations in growth). Phytoplankton levels should be maintained above a WFD assessment tool score of 0.6, where there is only a minor (a) decline in species richness, and (b) disturbance to the diatom-dinoflagellate succession in the spring bloom compared to reference conditions.</p> <p>There is evidence from survey or monitoring that shows the feature to be in a good condition and/or currently un-impacted by anthropogenic activities.</p>
<p>Breeding bird assemblage. Breeding</p>	<p>Supporting habitat: water quality - turbidity</p>	<p>Maintain natural levels of turbidity (e.g. concentrations of suspended sediment, plankton and other material) across the habitat.</p>	<p>Year-round</p>	<p>Water turbidity is a result of material suspended in the water, including sediment, plankton, pollution or other matter from land sources. Turbidity levels can rise and fall rapidly as a result of biological (eg plankton blooms), physical (eg storm events) or human (eg development) factors. Prolonged changes in turbidity may influence the amount of light reaching supporting habitats, affecting the primary production and nutrient levels of the habitat's associated communities. Changes in turbidity may also have a range of biological effects on different species within the habitat, eg affecting their abilities to feed or breathe.</p> <p>A prolonged increase in turbidity is indicative of an increase in suspended particulates. This has a number of implications for the aquatic / marine environment, such as affecting fish health, clogging the filtering organs of suspension feeding animals and affecting sedimentation rates. This in turn can adversely affect the availability and suitability of bird breeding, rearing, feeding and roosting habitats.</p> <hr/> <p>Site-specifics:</p> <p>The target has been set due to a lack of evidence that the feature is being impacted by any anthropogenic activities.</p>