



Little Crow

Solar Park

Little Crow Solar Park, Scunthorpe

**APPLICANT'S RESPONSE TO EXAMINING
AUTHORITY QUESTIONS (EXQ1)
DEADLINE 2**

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APPLICANT'S RESPONSE TO THE EXAMINING AUTHORITY'S WRITTEN QUESTIONS AND REQUESTS FOR INFORMATION (EXQ1)

ON BEHALF OF INRG SOLAR (LITTLE CROW) LTD

DEADLINE 2

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1. APPLICANT'S RESPONSE TO EXAMINING AUTHORITY'S QUESTIONS (EXQ1)

Purpose of this Document

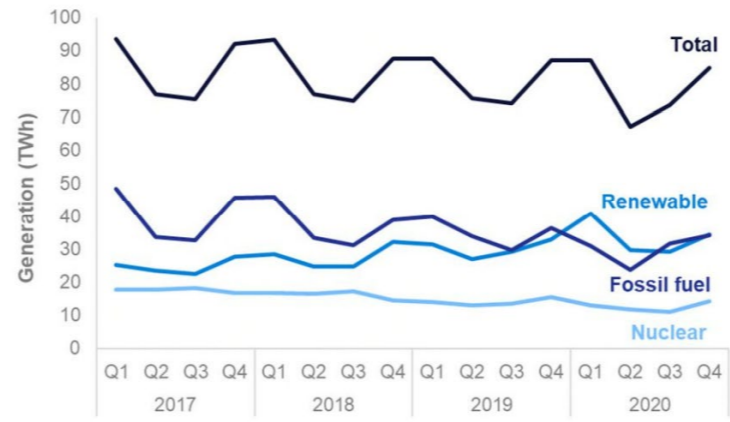
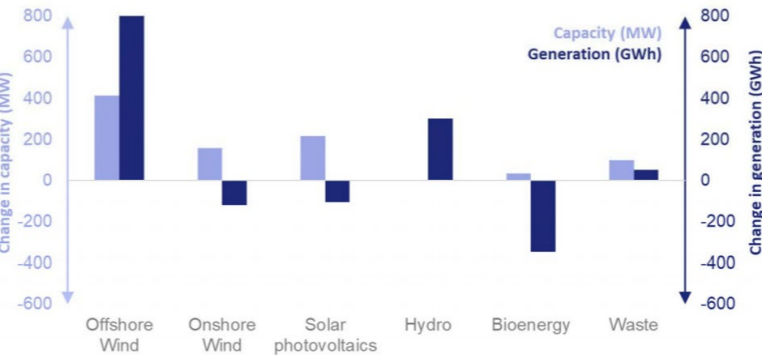
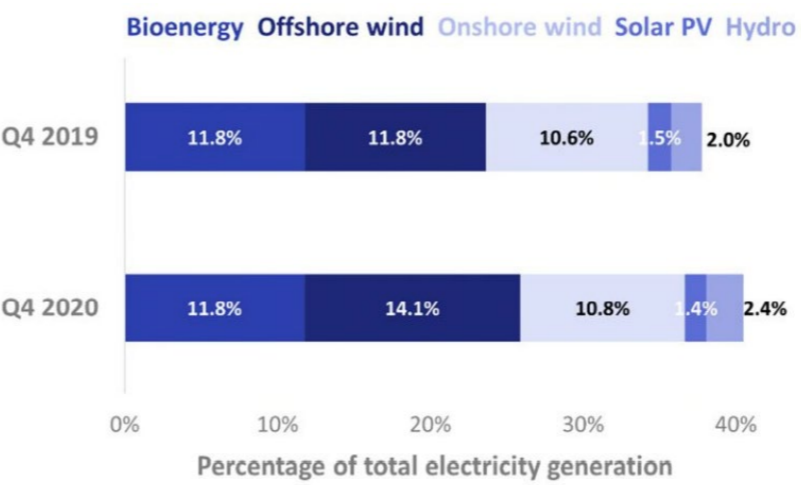
- 1.1 This document is submitted by INRG Solar (Little Crow) Ltd ("the Applicant") and contains the Applicant's response to the Examining Authority's written questions and requests for information (ExQ1) Issued on Tuesday 27 April 2021.
- 1.2 The Applicant's response is presented in a tabulated format.

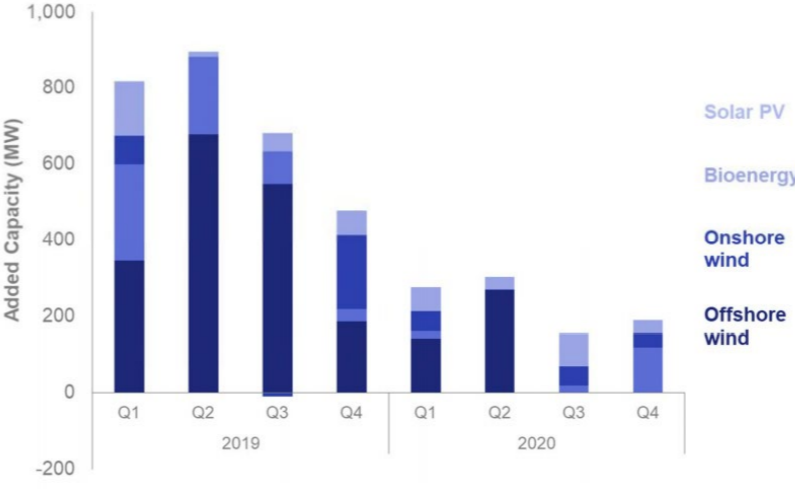
APPLICANT'S RESPONSE

| ExQ1 | Question to: | Question: | Applicant's Response |
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| 1. General and Cross-topic Questions, including general matters relating to the Environmental Statement | | | |
| 1.1.2 | The Applicant | <p>Please explain in non-technical terms what the following parts of paragraph 4.6.3 and accompanying footnote 3 in Chapter 4 of the Environmental Statement (ES) [APP-061] means:</p> <p><i>'... Being able to absorb and release energy, the battery energy storage system at Little Crow can be used to contribute towards the frequency balancing services, where the power is being generated or absorbed statically or dynamically depending on the system frequency. When there is not enough power, batteries are discharged to balance under frequency preventing black and brown outs. To balance over frequency batteries are charged to prevent dangerous spikes across electricity infrastructure.'</i></p> | <p>This has been explained at Section 8 of the Applicant's Technical Guide submitted at Deadline 1 (Document Ref 9.20 LC OTH, PINS Reference REP1-009).</p> |
| 1.1.3 | The Applicant | <p>If solar panel technology was to advance so that panels of a higher rating than the candidate panels of 420 watts could be used, what implications might that have for the land take and layout for the Proposed Development? (If the Applicant's answer to this question is covered in the explanatory note to be submitted at Deadline 1 in response to the first action point arising out of the holding of Issue Specific Hearing 1, then please provide a cross reference to the part of the aforementioned note that addresses the matter raised in this question.)</p> | <p>Paragraph 8.7 of the Applicant's Technical Guide submitted at Deadline 1 (Document Ref 9.20 LC OTH, PINS Reference REP1-009) provides two scenarios based on the candidate panel of 420Wp and a higher rating panel of 535Wp. To summarise, based on a candidate design of 356,670 panels at 420Wp each, the total output would be 149.8MWp; a similar design and same number of panels rated at 535Wp bifacial panels would deliver 190.8MWp. Theoretically, it may be therefore be possible to either generate more power from within the land forming Work No.1 or alternatively to reduce the amount of land within Work No.1 required for the construction of panels. In the latter case, and dependent on the extent of land available, this may enable consideration to be given to constructing the battery storage element of the project in the area shown as Work No.2B. However, the Applicant would only be able to make these decisions at the point of final scheme design and panel procurement.</p> <p>Clarity on the maximum land coverage of the solar panels is provided at item 3a(iii) of Applicant's Post Hearing Submissions ISH1 (Document Ref 9.17 LV OTH, PINS Reference REP1-008).</p> |
| 1.1.4 | The Applicant | <p>At paragraph 4.22.2 of Chapter 4 (Development Proposal) of the ES [APP-061] it is stated:</p> <p><i>'With regards to renewable energy, the principal methods of considering alternatives is through the site selection process ...'</i></p> <p>What is the source for that proposition?</p> | <p>The UK Solar PV Strategy Part 1: Roadmap to a Brighter Future (UK Solar PV Roadmap) (provided at Appendix 1) provides four guiding principles that form the basis of the Government's strategy for solar PV. Principle III (see page 14) states "Support for solar PV should ensure proposals are appropriately sited, give proper weight to environmental considerations such as landscape and visual impact, heritage and local amenity, and provide opportunities for local communities to influence decisions that affect them".</p> <p>Reflecting the above, the Applicant's approach to the consideration of alternatives is embedded in its site selection process. The Applicant asked itself the question whether its proposals were appropriately sited and had regard to consultation responses to inform its considerations. Where the Applicant considered that its proposals were not appropriately sited then it considered alternatives it felt able to conclude that the project is appropriately sited. Examples of changes that were made to the proposals during the design evolution process were explained in the Applicant's Post-Hearing Submissions on ISH1 submitted at Deadline 1. (Document Ref 9.17 LV OTH, PINS Reference REP1-008).</p> |

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| 1.1.5 | The Applicant | <p>If a point of connection to the electrical grid was not available within the Order Limits, would the site for the Proposed Development be a suitable location for a solar park of the intended generating capacity? (If the Applicant's answer to this question is covered in the explanatory note to be submitted at Deadline 1 in response to the first action point arising out of the holding of Issue Specific Hearing 1, then please provide a cross reference to the part of the aforementioned note that addresses the matter raised in this question.)</p> | <p>If a point of connection to the electricity grid was not available within the Order Limits* then the Applicant still considers that the site is highly suitable in development management and environmental terms and therefore would remain a suitable and appropriate location for the development proposal.</p> <p>The Applicant's assessment of the appropriateness of the site to accommodate the development proposal, taking into account the land use and environmental considerations as set out by Principle III) of the UK Solar PV Roadmap, is presented through Section 5 of the Planning Statement (Document Reference 9.1 LC OTH, PINS Reference APP-109). The suitability of the site has also been tested at the informal and formal pre-application stages, and by the time the application was submitted, there were no known objections held by either North Lincolnshire Council or key statutory consultees, including Natural England, Environment Agency, Highways England, Health and Safety Executive, Public Health England and Historic England. This serves to demonstrate the appropriateness of the Order Limits to accommodate the development proposal.</p> <p>Furthermore, consultation with the local community has enabled them to influence the project as detailed in the Consultation Report (Document Reference 4.1 LC DOC, PINS Reference APP-050). The Consultation Report also sets out how the majority of community representation received during the informal and formal consultation were in support of the development. This includes representations from the Parish Councils and local residents. Again, this local public support for the proposals, demonstrates the suitability of the Order Limits to accommodate the development proposal.</p> <p>Whilst, the absence of a grid connection in the locality would be a potential technical or economic reason for a project not proceeding, its presence does not override the policy considerations on whether this is a suitable site in planning and environmental terms which the Applicant has rigorously tested during the formulation of its proposals.</p> <p><i>* The Applicant has interpreted this question as being a specific reference to the extent of the Order Limits as proposed in the application. Applications for generating stations almost always encompass the grid connection within their Order Limits, but often this requires a linear cable connection, often several kilometres in length, outside the site of the main generating station itself to the point of connection. That is not required as part of these proposals due to the availability of an appropriate grid connection within the area proposed for the generating station.</i></p> |
| 1.1.6 | The Applicant | <p>With respect to the generation of electricity, for generating technologies other than solar please provide estimates for the land take requirements for each technology for a generating capacity of between 150 and 200 MW.</p> | <p>Section 4.22 of Chapter 4 of the Environmental Statement (Document Reference 6.3 LC ES CH.4, PINS Reference APP-061) provides a 'land take' requirements for energy crop production per MWh. As identified at paragraph 4.3 of the Technical Guide (Document Reference 9.20 LC OTH, PINS Reference REP-011), we have made reference to MWh instead of MW and this describes how much electricity is produced in a specific period of time.</p> <p>Turning to onshore wind, the Brechfa Forest West Wind Farm Order 2013 (Statutory Instrument 2013 No. 586) authorised construction of an onshore wind farm up to 84MW. The stated application site area as noted by the Examining Authority in paragraph 2.1 of its Report was approximately 1,041 hectares. The Clocaenog Forest Wind Farm Order 2014 (Statutory Instrument 2014 No. 2441) authorised the construction of an onshore wind farm up to 96 MW. Again, the Examining Authority's Report (see para 2.2) records the application site area as being 1,581ha.</p> <p>In terms of other technology, The Palm Paper 3 CCGT DCO (Statutory Instrument 2016 No. 166) authorised the construction of a new 162MW CCGT Power Station on an existing site. The Examining Authority's report confirms at paragraph 2.0.3 that the existing site was 40 hectares, with site for the purposes of the DCO being a 1 hectare extension, the CCGT itself comprising 3,500 square metres.</p> |

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| | | | <p>Finally, The Kemsley Combined Heat and Power (CHP) Generating Station DCO (Statutory Instrument 2018 No 1091) authorised the construction of a new CHP with a nominal output of 68-73 MW. The Examining Authority's Report confirms at paragraph 2.4.1 that the Order limits for that development were 6.67 hectares, with the new CHP itself being 1.4 hectares.</p> |
| 1.1.7 | The Applicant | <p>Given that the National Policy Statement for Renewable Energy Infrastructure (EN-3) does not cover solar energy generation, for all of the electricity currently generated by renewable and non-renewable sources in England and Wales:</p> <p>a) On a daily basis what is the power output (expressed in a suitable wattage unit) for each of the technologies that are presently being used and what is the proportional split between each of those technologies?</p> <p>b) In percentage terms what would 150 to 200 MW of additional generating capacity represent as an increase to the existing daily generating capacity?</p> | <p>Firstly, with regards to EN-3, the Applicant agrees that the National Policy Statement for Renewable Energy Infrastructure does not cover solar energy, and this is discussed at paragraph 4.33 of the Applicant's Planning Statement (Document Reference 9.1 LC OTH, PINS Reference APP-109). Notwithstanding this, National Policy Statements form part of the overarching policy documents which should be considered when determining NSIP solar projects. This position was established by the Cleve Hill Solar Park Examining Authority, whereby the Examining Authority made the following recommendation at paragraph 3.3.19 of their Examination Report (inter alia) "we consider that NPS EN-1 is 'important and relevant' to the decision on this Application because: the Proposed Development is a generating station with a capacity of more than 50MW and the policies in NPS EN-1 are devised specifically for generating stations and energy infrastructure of this scale; and NPS EN-1 contains paragraphs that emphasise the national need for electricity and electricity infrastructure, including electricity storage - battery storage can contribute to consistency of electricity supply, particularly in the context of an increasing reliance on intermittent renewables"</p> <p>The same must also apply to the Little Crow Solar Park. Part 3 of NPS EN-1 highlights the need for all the types of energy infrastructure covered by the NPS for energy security and to reduce greenhouse gas emissions dramatically. It identifies how it is for industry to propose new energy infrastructure projects within the strategic framework set by Government, and planning policy should not set targets for, or limits on, different technologies. All applications for development consent for the types of infrastructure covered by the energy NPSs should be assessed on the presumption that there is a need for those types of infrastructure. Substantial weight is to be given to the contribution which projects would make towards satisfying this need when considering applications under the PA2008. NSIP applications should therefore be assessed on the basis that the Government has already demonstrated that there is a need for those types of infrastructure and that the scale and urgency of that need is as described in the EN-1. Paragraph 6.2 of the Applicant's Planning Statement [Document Reference 9.1 LC OTH, PINS Reference APP-109] which explains that for the Cleve Hill Solar Park DCO decision, the Secretary of State agreed with the Examining Authority in giving significant weight to the solar element with regard to its contribution towards identified. The Secretary of State also agreed with the Examining Authority that the proposed co-located battery energy storage system was a factor providing significant additional weight.</p> <p>a) Data on energy trends is published every quarter by the Department for Business, Energy & Industrial Strategy. These quarterly tables are issued on the last Thursday of each calendar quarter (March, June, September and December). The data is a quarter in arrears. The final consumption of electricity was 284.4 TWh in 2020, a split of energy breakdown by fuel is presented in the table below. Document is provided at Appendix 2.</p> |

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|---------------|--------------|--------------|--|--------|-------------|-------------|-----------|-------|-------|---------------|-------|-------|--------------|-------|-------|----------|------|------|-------|------|------|--------------|--------------|--------------|
| | | | <div>  <p>The line chart displays quarterly generation in TWh from 2017 to 2020. The 'Total' generation (black line) fluctuates between approximately 70 and 95 TWh. 'Renewable' generation (blue line) shows a steady upward trend, crossing 'Fossil fuel' (light blue line) in Q4 2019 and reaching a record of 134.3 TWh in Q4 2020. 'Nuclear' generation (dark blue line) remains relatively stable, fluctuating between 10 and 15 TWh.</p> </div> <p>In 2020, renewable generation increased by 11 per cent (13.8 TWh) to a record 134.3 TWh, outstripping generation from fossil fuels for the first time. Offshore wind generation accounted for most of the increase with high wind speeds and some added capacity. Overall, renewables accounted for 42.9 per cent of total generation, another new record. Changes in renewable generation and capacity between Q4 2019 and Q4 2020 is presented in the chart below:</p> <div>  <p>This bar chart compares the change in capacity (MW) and change in generation (GWh) for six energy sources between Q4 2019 and Q4 2020. Offshore wind shows the most significant increase in both capacity (approx. 400 MW) and generation (approx. 700 GWh). Onshore wind also shows a notable increase in capacity (approx. 150 MW) and a decrease in generation (approx. -100 GWh). Solar photovoltaics, Hydro, Bioenergy, and Waste show smaller changes in both metrics.</p> </div> <p>The proportionality of the share of renewable energy generation between Q4 2019 and Q4 2020 is shown below: -</p> <div>  <p>The stacked bar chart illustrates the percentage of total electricity generation for five renewable sources in Q4 2019 and Q4 2020. The total percentage of renewable generation increased from 37.7% in Q4 2019 to 42.9% in Q4 2020. Offshore wind's share grew from 11.8% to 14.1%, while onshore wind's share decreased from 10.6% to 10.8%. Bioenergy, Solar PV, and Hydro shares remained relatively stable, with minor fluctuations.</p> <table border="1"> <thead> <tr> <th>Source</th> <th>Q4 2019 (%)</th> <th>Q4 2020 (%)</th> </tr> </thead> <tbody> <tr> <td>Bioenergy</td> <td>11.8%</td> <td>11.8%</td> </tr> <tr> <td>Offshore wind</td> <td>11.8%</td> <td>14.1%</td> </tr> <tr> <td>Onshore wind</td> <td>10.6%</td> <td>10.8%</td> </tr> <tr> <td>Solar PV</td> <td>1.5%</td> <td>1.4%</td> </tr> <tr> <td>Hydro</td> <td>2.0%</td> <td>2.4%</td> </tr> <tr> <td>Total</td> <td>37.7%</td> <td>42.9%</td> </tr> </tbody> </table> </div> | Source | Q4 2019 (%) | Q4 2020 (%) | Bioenergy | 11.8% | 11.8% | Offshore wind | 11.8% | 14.1% | Onshore wind | 10.6% | 10.8% | Solar PV | 1.5% | 1.4% | Hydro | 2.0% | 2.4% | Total | 37.7% | 42.9% |
| Source | Q4 2019 (%) | Q4 2020 (%) | | | | | | | | | | | | | | | | | | | | | | |
| Bioenergy | 11.8% | 11.8% | | | | | | | | | | | | | | | | | | | | | | |
| Offshore wind | 11.8% | 14.1% | | | | | | | | | | | | | | | | | | | | | | |
| Onshore wind | 10.6% | 10.8% | | | | | | | | | | | | | | | | | | | | | | |
| Solar PV | 1.5% | 1.4% | | | | | | | | | | | | | | | | | | | | | | |
| Hydro | 2.0% | 2.4% | | | | | | | | | | | | | | | | | | | | | | |
| Total | 37.7% | 42.9% | | | | | | | | | | | | | | | | | | | | | | |

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|-------|---|---|---|------|----|----|----|----|------|------|------|------|------|------|------|------|------|------|
| | | | <p>However, whilst renewable energy accounted for 42.9 per cent of total generation, the growth of renewable capacity began to slow in mid-2019 and this continued during 2020, with less than 1 GW (2.0 per cent) added during the year, the lowest percentage increase seen since 2010. Table below shows added capacity in relation to leading renewable technologies during 2019 and 2020. The slow down in the delivery of new renewable energy projects is out of kilter with the level and urgency of need for infrastructure as set out by EN-1. Notwithstanding the matter of fact that the development would provide a nominal percentage increase to the existing overall renewable energy portfolio, the development itself is afforded with significant weight in the planning balance as set out by national policy and demonstrated in the Cleve Hill DCO decision.</p>  <table border="1"> <caption>Added Capacity (MW) by Quarter</caption> <thead> <tr> <th>Year</th> <th>Q1</th> <th>Q2</th> <th>Q3</th> <th>Q4</th> </tr> </thead> <tbody> <tr> <td>2019</td> <td>~800</td> <td>~900</td> <td>~650</td> <td>~450</td> </tr> <tr> <td>2020</td> <td>~250</td> <td>~300</td> <td>~150</td> <td>~200</td> </tr> </tbody> </table> <p>b) Final consumption of electricity in 2020 was 284.4TWh which averaged per day would equate to 779,178MWh/day. A 200MWp solar farm would produce c175,000MWh in one year which averaged per day would equate to 479MWh/day which would represent 0.06% of the daily consumption of electricity in the UK across all forms of generation.</p> <p>The total installed capacity of PV solar in the UK currently stands at 14GWp and the addition of a further 200MWp would represent a 1.5% increase in the total installed capacity.</p> | Year | Q1 | Q2 | Q3 | Q4 | 2019 | ~800 | ~900 | ~650 | ~450 | 2020 | ~250 | ~300 | ~150 | ~200 |
| Year | Q1 | Q2 | Q3 | Q4 | | | | | | | | | | | | | | |
| 2019 | ~800 | ~900 | ~650 | ~450 | | | | | | | | | | | | | | |
| 2020 | ~250 | ~300 | ~150 | ~200 | | | | | | | | | | | | | | |
| 1.1.8 | The Applicant, North Lincolnshire Council and the owners and occupiers of Heron Lodge | Under a 'do nothing' scenario for the Proposed Development, where might 150 to 200 MW of electricity be generated as an alternative to the Proposed Development? Is there previously developed land in the area that could be used as an alternative to the Order Limits? | <p>As mentioned in response to ExQ1.1.7 above, national policy (EN-1) establishes the need for renewable energy on any suitable site (Part 3 of EN-1 specifically deals with the need for new nationally significant energy projects and section 3.4 focuses on the role of renewable energy) Accordingly, the thrust of national policy is that renewable energy is needed on any suitable site and therefore in the "do nothing" scenario the ability to generate power for which there is an established need on a suitable site would be lost.</p> <p>The issue of alternatives was also considered in detail by the Examining Authority considering the Cleve Hill NSIP application. The Examining Authority response was that, with regards to using commercial roofs, such proposals could proceed in parallel with the Cleve Hill scheme and this would be consistent with the overall need case set out in NPS EN-1 (paragraph 5.5.45). A copy of the Examining Authority's Report of Findings and Conclusions to the Cleve Hill Solar Park is provided at Appendix 3. EN-1 identifies at paragraph 4.4.1 that (inter alia) "From a policy perspective this NPS does not contain any general requirement to consider alternatives or to establish whether the proposed project represents the best option".</p> | | | | | | | | | | | | | | | |

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| | | | <p>As set out in Applicant's Response to Relevant Representation (Document Reference 9.18 LC OTH, PINS Reference REP1-009), North Lincolnshire Council are in agreement that due to the limited supply of brownfield/previously developed land within North Lincolnshire, a location such as the application site is required for large scale renewable energy schemes.</p> <p>The Applicant notes that the Deadline 1 response submitted by the Interested Parties at Heron's Lodge refers to the potential availability of derelict land along the Humber banks, on wartime and post-war airfields and on the former British Sugar Factory at Brigg. The Applicant further notes that when third parties put forward alternatives after the application has been made then the EN-1 provides the following advice (at page 50). "Where an alternative is first put forward by a third party after an application has been made, the IPC may place the onus on the person proposing the alternative to provide the evidence for its suitability as such and the IPC should not necessarily expect the applicant to have assessed it".</p> <p>The Interested Parties have not submitted any evidence as to the potential suitability of these sites and therefore the Applicant is not in a position to provide a substantive response at this Deadline. However, it reserves its position to do so at a later date should any such evidence be submitted.</p> <p>Nevertheless, the Applicant would emphasise the third bullet point of paragraph 4.4.3 of EN-1 by way of general response to the Interested Parties' suggestions:</p> <p>"where (as in the case of renewables) legislation imposes a specific quantitative target for particular technologies or (as in the case of nuclear) there is reason to suppose that the number of sites suitable for deployment of a technology on the scale and within the period of time envisaged by the relevant NPSs is constrained, the IPC should not reject an application for development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site, and it should have regard as appropriate to the possibility that all suitable sites for energy infrastructure of the type proposed may be needed for future proposals"</p> |
| 1.1.9 | The Applicant | <p>With respect to the assessment of the cumulative and in-combination effects for the Proposed Development and other projects (developments) included in the constituent chapters of the ES:</p> <p>a) Chapter 10 (Agricultural Circumstances) of the ES [APP-067] does not include an assessment of the cumulative and in-combination effects with other projects, such an assessment should be submitted.</p> <p>b) Has the assessment of the cumulative and in-combination effects with other projects been restricted only to consideration of other solar energy schemes? If not, then please identify which other projects have been considered?</p> <p>c) If the assessment of the cumulative and in-combination effects with other projects has been restricted to the consideration of only solar energy schemes, does that</p> | <p>Having regard to the guidance set out in PINS Advice Note 17, the Applicant does not consider that there are any developments requiring cumulative assessment beyond those set out in the ES. The Applicant's responses below provide further commentary in the light of that guidance,</p> <p>a) – The Applicant does not consider that there are any projects which might give rise to likely significant cumulative or in-combination effects with the Little Crow proposals. Whilst the Raventhorpe Solar Farm is approximately 200m south of the Little Crow Order Limits at its closest point, it formed part of the existing baseline for the purposes of the assessment in the ES. Nevertheless, given its proximity the Applicant provides further commentary on any effects of the Little Crow proposals in combination with the Raventhorpe Solar Farm. Permission for the Raventhorpe Solar Farm was granted in November 2014, with details of the planning application on the North Lincolnshire planning site under reference PA/2014/0892 (see PINS Reference REP1-019 for Delegated officers report).</p> <p>An ALC assessment for the Raventhorpe site was submitted as part of the planning application. This found that the 83.2ha site comprised 14.7ha Grade 3a, 50.9ha Grade 3b and 17.6ha Grade 4. The proportion of best and most versatile land present is therefore very much consistent with the larger Little Crow site to the north.</p> <p>The consent for the Raventhorpe Solar Farm contains an obligation to decommission that project after 30 years. For both the Raventhorpe and Little Crow proposals, operation of the solar PV generation will not result in any loss of agricultural land resource. Land can continue in agricultural production through sheep grazing to</p> |

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| | | <p>approach meet the requirements of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) for the inclusion of information within an ES?</p> <p>d) If the assessment of the cumulative and in-combination effects is considered not to meet the requirements of the EIA Regulations, please explain how the ES as a whole or its constituent parts could be revised to address the deficiency.</p> | <p>control vegetation between and below the solar panel rows. Where land had been in arable production the effective extended fallow period without cultivation will enable a recovery of soil organic matter, delivering benefits for soil health.</p> <p>When considered in conjunction, receptors are similar across both sites and having given consideration to the standalone effects of the Little Crow proposals as set out in Table 10.11 of the ES (Document Reference 6.10 LC ES CH10, PINS Reference APP-067) it is therefore considered that the Raventhorpe Solar site does not create any additional environmental effect, cumulatively or in combination with Little Crow, for Soils and Agriculture.</p> <p>b) The Applicant has considered all potential development projects (not just solar energy schemes) in the vicinity of the Little Crow proposals against the criteria set out in Table 2 of PINS Advice Note 17 and does not consider that there are any projects of relevance for the purposes of cumulative assessment. As noted in paragraph 2.10 of the ES (Document Reference 6.2 LC ES CH2, PINS Reference APP-059), this conclusion was reached in agreement with North Lincolnshire Council and the Applicant is not aware of any further application or development plan proposals since that date which might alter that conclusion.</p> <p>c) As described at paragraph 2.10 of the Environmental Statement (Document Reference 6.2 LC ES CH2, PINS Reference APP-059) and expanded through applicant's response to question 3d of the Applicant's ISH1 submission (Document Reference 9.17 LC OTH, PINS Reference REP1-008), as part of the EIA process and to inform the EIA approach to cumulative effects, the applicant consulted with North Lincolnshire Council to establish the scope of any potential plans or projects that should be considered under the cumulative assessment. This was not limited to solar projects. Following ISH1, the Applicant corresponded with North Lincolnshire Council to obtain their latest understanding on potential cumulative impacts. North Lincolnshire Council advised on 14 May 2021 that, in their opinion, there are no additional developments which need to be included within the Applicant's Environmental Statement with regards to cumulative developments. A copy of their response is provided at Appendix 4.</p> <p>d) The Applicant considers that its ES does meet the requirements of the EIA Regulations as regards cumulative and in-combination assessment.</p> |
| 1.1.10 | North Lincolnshire Council | With respect to the description of the likely effects on the environment stated in the submitted ES, and having regard to the requirements of Regulation 14(2)(b) and paragraph 5 of Schedule 4 of the EIA Regulations, are there any existing or proposed developments that it is considered should have been included in the Applicant's assessment of the cumulative and in-combination effects for the Proposed Development? | The Applicant's position on this matter is set out under question 1.1.9 above. |
| 1.1.11 | The Applicant | Please explain how significant major accidents and disasters have been defined in the ES (i.e. significance threshold) with reference to relevant significance criteria. | <p>Section 4.20 of the Environmental Statement (Document Reference 6.4 LC ES CH4, PINS Ref APP-061) presents the Applicant's assessment of the likely significant effects arising directly from the proposed scheme if it were to be affected by a major accident and/or disaster. The text set out below provides some further amplification to section 4.20 and provides the assessment methodology and significance criteria.</p> <p>In the context of section 4.20, as set out in the IEMA's guide Major Accidents and Disasters in EIA: A Primer, dated September 2020 (copy provided at Appendix 5), typical methods employed within EIA to define significance are not applicable. By definition, a major accident or disaster would have a significant effect on the environment. Accordingly, any risks that could result in a major accident or disaster without suitable mitigation, management or regulatory controls in place will be assessed as significant. The significance criteria for major accidents and disasters has therefore been based on professional judgement of the Applicant and their consultant team. This is an accepted approach as set out in the IEMA's guide Major Accidents and Disasters in EIA: A Primer, dated September 2020 (copy provided at Appendix 5).</p> |

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| | | | <p>The IEMA defines major accidents as <i>"Events that threaten immediate or delayed serious environmental effects to human health, welfare and/or the environment and require the use of resources beyond those of the client or its appointed representatives to manage. Whilst malicious intent is not accidental, the outcome (e.g. train derailment) may be the same and therefore many mitigation measures will apply to both deliberate and accidental events"</i> (Source - Major Accidents and Disasters in EIA: A Primer dated September 2020). The IEMA continues to define <i>significant environmental effect</i> (in relation to a major accidents and/or disasters assessment as <i>"Could include the loss of life, permanent injury and temporary or permanent destruction of an environmental receptor which cannot be restored through minor clean-up and restoration"</i>.</p> <p>For the purpose of the assessment, major accident or disaster has been defined as an event that threatens immediate or delayed loss of life or permanent injury/or serious long lasting or permanent damage to the environment and requires the use of resources beyond those of the Applicant to manage. These could be internal to the proposed development or an external event that could affect the proposed scheme. Disaster has been defined as a naturally occurring phenomenon such as an extreme weather event (e.g. storm or flood) or ground related hazard events (e.g. subsidence or landslides). Major events therefore includes both man-made and naturally occurring events. The assessment of the reasonably foreseeable worst-case environmental consequence is the likelihood for significant effects.</p> <p>With regards to vulnerability, low consequence events do not meet the definition of major accidents or disasters. For example, minor spills which may occur during construction, but would be limited in area and volume and temporary in nature would not meet the definition of a major accident. These low consequence / or low risk events would not threaten immediate or delayed serious environmental effects to human health, welfare and/or the environment that require the use of resources beyond those of the client or its appointed representatives to manage. These have therefore been scoped out of the assessment and are dealt with through other documentation or assessments supporting the Environmental Statement such as the Outline Construction Environmental Management Plan (Document Reference 7.8A LC TA4.2); and the Outline Construction and Environmental Management Plan for Biodiversity (Document Reference 7.27 LC TA7.7, PINS Reference APP-096).</p> <p>The risks and potential effects that are knowingly caused by the development which can be quantified and assessed, such as noise and potential for traffic accidents are also taken into account within other documents / other topics of the Environmental Statement and as such haven't been replicated in the Major Accidents and Disasters assessment. Such events would also be dealt with under the Applicant's compliance with environmental working practices and legislative requirements, including: -</p> <ul style="list-style-type: none"> • Construction (Design and Management) Regulations 2015. The Construction (Design and Management) Regulations 2015 (CDM Regulations) place legal duties on almost all parties involved in construction work. The regulations place specific duties on clients, designers and contractors, so that health and safety is taken into account throughout the life of a construction project from its inception to its subsequent final demolition and removal. Under the CDM Regulations, designers have to avoid foreseeable risks so far as is reasonably practicable by: eliminating hazards from the construction, cleaning, maintenance, and proposed use and demolition of a structure, reducing risks from any remaining hazard, and giving collective safety measures priority over individual measures. • Management of Health and Safety at Work Regulations 1999 - The Management of Health and Safety at Work Regulations 1999 reinforce employer's duties to manage health and safety and apply to all work activities. The principal of risk based assessment provides the cornerstone for management of health and safety and all employers are required to undertake risk assessments • Health and Safety at Work etc. Act 1974 - The Health and Safety at Work etc. Act 1974 provides the framework for the regulation of workplace health and safety in the UK. It places general duties on |

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| | | | employers, people in control of premises, manufacturers and employees. The overriding principle is that foreseeable risks to persons will be reduced so far as is reasonably practicable. |
| 1.1.12 | The Applicant | The assessment of major accidents and disaster does not consider potential impacts as result of chemical leakage from the Battery Energy Storage System. Please provide what mitigation would be provided to mitigate any potential chemical leakage from the Battery Energy Storage System and how any such mitigation would be secured through any madeDevelopment Consent Order. | <p>There are many mitigation measures in place both in the form of legislation and the Battery Energy Storage System ('BESS') design itself to mitigate against chemical leakage from the BESS.</p> <p>In terms of legislation all Lithium-Ion batteries must be transported in accordance with UN 38.3 to which the UK is a signatory. Safe transportation ensures no damage to the batteries prior to use. The BESS will be constructed in accordance with the International Electrotechnical Commissions standards for Electrical Energy Storage Systems. Details of these standards are contained in Section 4.2 of the Outline Battery Safety Management Plan (Document Reference 7.14 LC TA4.8, PINS Reference APP-083).</p> <p>During the operation of the BESS each of the lithium-ion cells are constantly monitored to ensure optimal performance and temperature. The battery racks which contain the lithium-ion cells within the BESS will be designed and tested to conform with the requirements of UL9450(A) which is the strictest fire regulation in place today for BESS. The battery management system within the BESS can detect temperature rises also known as thermal runaway in cells which could lead to exceedance of safe operating temperatures and ultimately cell failure and enable these cells to be remotely shut down to avoid cell failure and the risk of chemical leakage. As a further layer of mitigating features the BESS will have an internal fire suppression system within each rack which is activated when the smoke and heat detectors within each rack are triggered.</p> <p>Details of these systems are explained in Appendix 1 of the Outline Battery Safety Management Plan which forms Appendix 4.7 to the ES Compliance with the Management Plan is secured through Requirement 7 of the dDCO , and any revisions to it must be consulted upon with the Health and Safety Executive and Humberside Fire and Rescue. Furthermore, requirement 6 requires the detailed design of the battery storage element of the project to be approved by North Lincolnshire Council. The details submitted must, by virtue of requirement 6(2), accord with the principles and the assessments of the ES.</p> <p>The issue of accidents and disasters together with potential for chemical leakage was considered by the Examination authority and the Secretary of State during their consideration of the Cleve Hill Solar Park. The SoS decision letter notes at paragraph 4.176 "The ExA's overall conclusions on safety and security were that there were a large number of representations about this issue which flowed from the scale of the proposed battery storage facility, the fact that it was a new technology, the risk of major fires and the proximity of the battery storage facility to local populations. The ExA acknowledged those concerns. However, it took comfort from the legislation and guidance and the Battery Safety Management Plan which would be subject to consultation with relevant bodies and the ExA was, therefore, confident that the risks could be managed or mitigated appropriately. As far as site safety was concerned, the ExA noted that the measures proposed by the Applicant might be viewed as minimal but there was no evidence before it that anything else was needed - there was a sound basis for managing and mitigating site safety risks. The ExA's overall conclusion on this matter, therefore, was that there was nothing of weight to carry into the overall planning balance". A copy of the SoS decision for Cleve Hill is provided at Appendix 6.</p> |
| 1.1.13 | The Applicant | With respect to the temporary construction compound (proposed Work No. 7), please provide a description of how the land required for the compound will be reinstated or utilised following construction of the Proposed Development and clarify if potential effects arising from the removal of the temporary construction compound have been considered in the ES. | <p>The effects of the removal of the construction compound have been considered in the relevant technical chapter of the Environmental Statement. It is anticipated that the temporary construction compound, (Proposed Work No.7) will be restored back to agricultural land. Construction effects including the removal of the temporary compound were considered at para 6.4.9-14 of the LVIA (Doc Ref 6.6A LC ES CH6, PINS Ref PDA-006).</p> <p>The temporary structures associated with the temporary construction compound at Work No. 7 would not be</p> |

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| | | | <p>anticipated to represent potentially suitable habitat for wildlife species, and therefore the removal of these features followed by reinstatement to agricultural land is not expected to result in any significant effects on ecological features considered within the ES.</p> <p>With respect to cultural heritage no significant impacts (either direct on archaeological features/deposits or indirectly through the alteration to the setting of heritage assets) have been identified during the construction or operational phase of the temporary construction compound. There is no evidence to suggest that the removal of the compound and the reinstatement of the land will result in any cultural heritage impacts.</p> <p>The forecast construction vehicle movements associated with the removal of equipment from the construction compound will not be significant and are encapsulated within Table 9.5 of the ES (Document Reference 6.9 LC ES CH10, PINS Reference APP-066). The management measures set out within the Outline CTMP (Document Reference 7.36 LC TA9.2, PINS Reference APP-105) will apply to all of these movements. As set out in Chapter 9 of the ES, the residual environmental effects in relation to transportation for the construction phase are considered to be temporary and negligible.</p> <p>Turning to agriculture, as for access tracks within the development, hard standing in the temporary construction compound will comprise aggregate over a geotextile membrane placed on top of the subsoil, topsoil having been stripped and stored on site. On reinstatement the aggregate will be recovered, and the geotextile membrane taken up. Prior to returning the stored topsoil the exposed subsoil can be cultivated (when in a friable consistence) to remove any significant areas of compaction.</p> |
| 1.1.14 | The Applicant | With respect to the decommissioning for the Proposed Development, what would be the duration of those work? | Please see the Applicant's explanation of the decommission phase in its ISH1- Post Hearing Submission (Document Reference 9.17 LC OTH, PINS Reference REP1-008) at response to item 3i)). The duration of the decommissioning works would take up to 11 months for both the battery storage and solar elements. The exception to this is the substation and the DNO access track. As mentioned in the Applicant's explanation in that document, the Applicant has updated the Outline Decommissioning Strategy and this is submitted with the Applicant's Deadline 2 submissions (Document Reference 7.9A LC TA4.2). |
| 1.1.15 | The Applicant | Neither the ES nor the outline Construction Environmental Management (CEMP) Plan [APP-077] provide an estimate of the quantity of waste that would be produced during construction and decommissioning of the Proposed development. Please provide details of the quantity of waste likely to be produced for the construction and decommissioning phases for the Proposed Development and how this would be managed through provisions of the CEMP. With respect to the decommissioning of the solar panels please explain how it is expected these would be disposed of. | <p>Section 13 of the Outline Construction Environmental Management Plan has been updated to incorporate a Waste Management Plan and provides a prediction of waste arisings (Document Reference 7.8A LC TA4.1) during construction.</p> <p>The decommissioning of the Little Crow Solar Park is discussed in Section 10 of the Technical Guide (Document Reference 9.20 LC OTH, PINS Reference REP1-011). The Technical Guide sets out how the relevant equipment can be re-used, recovered and recycled. As the majority of the equipment is classed as electrical it will fall under the Waste from Electrical and Electronic Equipment Regulations 2013 ('WEEE'). WEEE was introduced to reduce the amount of waste electrical equipment sent to landfill/incinerated and to promote re-use, recovery and recycling of electrical equipment. The quantity and traffic associated with transporting the equipment off site for re-use, recovery, recycle is expected to be similar to the construction phase.</p> |
| 1.1.16 | The Applicant | The ES provides a high-level evaluation of the likely effects as result of decommissioning of the Proposed Development. However, this primarily consists of a statement suggesting effects during the decommissioning phase would be similar to those identified in relation to construction of the Proposed Development and does not determine the significance of likely effects. Please provide more definitive | <p>The Applicant has provided commentary on the areas where it considers the potential for significant environmental effect as a result of decommissioning are most likely to occur. This commentary needs to be read in conjunction with the updated Outline Decommissioning Strategy (Document Reference 7.9A LC TA4.2)</p> <p>Landscape and Visual</p> |

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| | | <p>information regarding the likely significant effects as a result of decommissioning the Proposed Development.</p> | <p>With regards to landscape and visual effects, as set out at para 6.4.54 of the LVIA (Doc Ref 6.6A LC ES CH6, PINS Reference PDA-006), the effects during the decommissioning phase would be similar to those outlined in the Construction section, with levels of effect gradually reducing rather than increasing as the development is dismantled. The movement of vehicles, personnel and materials as the Solar Park is removed would result in a temporary moderate additional effect on the landscape character of the development site in addition to the operational effects. There would also be an additional moderate visual effect on views from the PROW network passing through the development site, as a result of the decommissioning activities. No additional temporary effects to existing landscape features beyond those considered within the operational stage were identified.</p> <p>Ecology</p> <p>For those ecological receptors identified on the site mitigation measures have been proposed during the construction and operational phases to reduce all adverse impacts to non-significant levels. The design of the array including the creation of significant areas of ecological important habitats that will be managed to promote and maximise their biodiversity importance is anticipated to result in significant beneficial impacts upon a range of species during the lifespan of the project. Decommissioning has the potential to result in ecological impacts on a number of the receptors for which beneficial impacts may have been established. This includes the establishment of botanically diverse habitats, new hedgerows, areas for ground nesting birds and other species of passerine birds, habitat for brown hare, terrestrial habitat for great crested newts and habitats for invertebrates. Further ecological studies will be necessary at the point of decommissioning to understand the nature of potential impacts. Where potential significant effects are identified mitigation measures will be required to reduce the scale of impact and potentially compensatory measures provided. Predicting the nature of these measures at this stage would be very speculative and the solutions identified at the point of decommissioning are likely to be based upon the guidance and policy landscape that is available at that time. However, it seems likely that the assemblage of species encountered on site will be similar to those species currently present (potentially with different abundances), and as such it is confidently anticipated that suitable mitigation strategies can be devised.</p> <p>Cultural Heritage</p> <p>With regard to cultural heritage the only potential impacts identified as arising during its construction and operational phase are through direct physical impact on features of archaeology interest. The assessment concluded that the archaeological interest on the site is relatively low and the scale of impacts from the scheme is also relatively low. Only a small number of locations of potential archaeological interest have been identified and these have been mitigated through design (i.e avoidance) or through a requirement for archaeology watching brief secured through requirement 13 of the dDCO.</p> <p>There is a small chance that support posts for the solar panels will impact on previously unknown archaeology. However, the scale of impacts will be very small, in the worst case representing only a small percentage of the feature/deposit impacted. The removal of the posts by pulling them vertically from the ground (Document Ref 7.9 LC TA4.2 ODS – para 2.12 (5)), will result in either no greater impact than construction or at worst only a minor additional impact.</p> <p>For elements of the proposed development that are more intrusive in the construction phase, i.e. concrete foundations/bases, cables & ducts and access tracks, the decommissioning strategy allows for the careful removal of these elements within the footprint of their construction (Document Ref 7.9A LC TA4.2 – para 2.12 (4), (6) & (10))). Therefore, it is considered that no additional impacts will occur during decommissioning and no additional mitigation is required.</p> |

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| | | | <p>The fencing around the Gokewell Priory exclusion area will remain in place during the decommissioning. Once this activity is complete the fence will be removed by hand (Document Ref 7.9 LC TA4.2 ODS – para 3.12 & 3.13).</p> <p>The decommissioning strategy (Document Ref 7.9 LC TA4.2 ODS – para 3.14) allows for the discovery of sensitive archaeological remains during the construction phase and if necessary, the plan will be updated to take account of any such discoveries.</p> <p>Decommissioning was considered as part of the assessment work and given the nature of the proposal development, the character and significance of the archaeology present it is not considered that the process of removal of the Proposed Development would result in any significant impacts on the archaeological resource present.</p> <p>Transport and Access</p> <p>The total forecast construction vehicle movements associated with the removal of equipment in the decommissioning phase will not exceed the number of vehicle movements associated with the delivery of equipment to the Site as part of the construction phase. This is set out in Table 9.5 of the ES. In light of this, all environmental effects in relation to transportation for the decommissioning phases will not be greater than for the construction phase. Therefore, the effects are considered to be temporary and negligible.</p> <p>Agricultural Circumstances</p> <p>Decommissioning effects are considered in chapter 10.10.6-10.10.9 of the ES (Document Reference 6.10 LC ES CH10, PINS Reference APP-067) and will be similar to construction effects for the agricultural land resource, soils, and farm businesses. Operations at the solar farm site will not generate any wastes or deleterious materials that could impact on agricultural land quality, the soil resource, farm operations or require remediation/decontamination. During decommissioning soil handling and restoration measures will be secured through the decommissioning strategy and would be expected to accord with the measures set out in the Outline Soil Management Plan which forms part of the Outline CEMP. Therefore, for soils and agriculture the impacts arising from removal of solar PV, mounts, cabling, access tracks and switchgear housing from the site will be the same as those for construction.</p> <p>Socio-Economic</p> <p>The socio-economic chapter estimates the build phase of the Proposed Development could support 233 temporary jobs, both on-site and in the wider economy, during the 11-month construction period. It goes on to state that the significance of the temporary effect is considered to be minor beneficial in the short-term, which is not a significant impact in EIA terms. The rationale for this conclusion is that there should be a readily available market to meet the requirement of on-site construction jobs (and therefore not put pressure on the labour market), while the absolute number of jobs supported (including those in the wider economy) does not represent a significant uplift on existing levels of employment. It is expected that a similar effect would be seen during the decommissioning process, i.e. temporary jobs supported (likely to be similar in number and duration to the construction phase) only represent a minor benefit in the short-term and this is not significant in EIA terms.</p> |

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| 1.1.18 | The Applicant | Within the draft Section 106 agreement or unilateral undertaking to be entered into pursuant to the Town and Country Planning Act 1990 (as amended) [APP-121], reference is made to the community fund being used to fund facilities in the Parishes of Appleby and Broughton. Is there a Parish of Broughton, given there is a Broughton Town Council? | <p>The Applicant is aware of Broughton Town Council but the Town Council website states that "Broughton is a small town and civil parish situated on the Roman Ermine Street, in the North Lincolnshire district of Lincolnshire, England".</p> <p>The definition of "Parishes" in the s106 obligation refers to the civil parish of Broughton which is correct.</p> <p>The draft has been approved by the local planning authority.</p> |
| 1.1.19 | The Applicant | Please clarify whether the planning obligations contained in the draft Section 106 agreement/unilateral undertaking [APP-121] will be secured through either an agreement or a unilateral undertaking, given that the draft document is titled as a unilateral undertaking, while its text suggests that North Lincolnshire Council is an intended signatory. | The initial draft was a unilateral undertaking. This has since been amended to a bi-lateral agreement which has been agreed with North Lincolnshire Council. A copy of the updated draft agreement is submitted with the Applicant's Deadline 2 submissions (Document Reference 9.13A LC OTH) |
| 1.1.20 | The Applicant | What is the correct name for the District Network Operator, either Northern Powergrid or Northern Power Grid, as both have variously been used in the submitted application documentation? | The correct name is Northern Powergrid. |
| 2. Agriculture and Soils | | | |
| 1.2.1 | The Applicant | Please explain how grass beneath the arrays of solar panels that could be grazed by sheep would be cultivated, as referred to in for example paragraph 4.5.2 of Chapter 4 of the ES [APP-061]. | <p>The grass beneath the arrays of solar panels will not be cultivated and there will be no requirement to do so. Paragraph 4.5.2 of the ES does not refer to cultivation of the site during the operational phase of the development.</p> <p>As the land within the order limits will not be cultivated, it will benefit from an extended fallow period – the excessive aeration from arable cultivation being a primary cause of the decline in soil organic matter. A permanent green cover, established prior to construction, will continue to grow between and below the solar panels, and grazed by sheep. The gaps between the panel rows are sufficiently wide that there will not be dead patches below the solar PV owing to insufficient light.</p> |
| 1.2.2 | The Applicant | Please advise how many sheep at any one time might be used to graze the Order Limits in association with the operation of the Proposed Development. | <p>The stocking rate for the site is not known. It will change according to multiple variables such as rainfall and the availability of fodder. Stocking rates will also be limited by the sheep-grazed conservation regime for biodiversity net gain.</p> <p>We can however be confident that the average stocking rate will be lower than would be the case were the site to revert from arable to grazing without the solar farm development. This is as the partial shading from the solar PV panels and the absence of fertiliser additions will reduce fodder yield compared to management of the same land for a commercial sheep enterprise.</p> |
| 3. Air Quality | | | |
| 1.3.2 | The Applicant | Please explain what consideration has been given to air quality and dust generation in connection with the use of the access track that passes to the north of Heron Lodge during the construction, operational and decommissioning phases for the Proposed Development in the submitted Air Quality and Carbon Assessment [APP-081]. | <p>Potential effects arising from works to and the use of the access track forming Work No.5 that passes to the north of Heron's Lodge has been considered within the assessment. The assessment takes into consideration the likely effects arising from works to and the use of all nearby roads, both public and construction related, inclusive of the access track, on sensitive receptors.</p> <p>The construction phase assessment completed in-line with the Institute of Air Quality Management best practice guidance is relevant to emissions of dust/PM₁₀ from construction related activities. The assessment has quantified the magnitude of impact associated with each of the construction activities (construction, earthworks and trackout i.e. dust produced from the movement of construction vehicles, including those on the access track). This coupled with the sensitivity of the area is used to assess the impact. As the existing</p> |

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| | | | <p>PM₁₀ concentrations are well below the AQS objective limits in the area, and the number of properties situated close to the site is low, the overall impact of the construction activities has been assessed as low. However, to ensure the overall impact remains low, mitigation measures have been recommended within the Construction Environmental Management Plan.</p> <p>Adopting a conservative approach, due to predicted vehicle flows being higher during the construction phase when compared to the operational phase, traffic emissions have been considered against Environmental Protection UK/ Institute of Air Quality Management best practice planning guidance. As the maximum number of Heavy Duty Vehicles travelling to and from the site does not exceed the 25 Average Annual Daily Traffic criteria limit for where further assessment should be considered, it is considered that there will not be any potential for significant air quality effects from development related road traffic emissions, including those on the access track, during the construction phase. Furthermore, with regard to the operational phase, the likely number of HDVs travelling to and from the site is below the 100AADT criteria limit for where further assessment should be considered. Similarly, it is therefore considered that there will not be any potential for significant air quality effects from development related road traffic emissions, including those on the access track, during the operational phase.</p> <p>The Applicant has updated the Air Quality and Carbon Assessment (Document Reference 7.12A LC TA4.5) to provide particular reference to the nearby receptors and has taken the opportunity to make some further clarifications.</p> |
| 1.3.3 | The Applicant | In terms of the calculation of the 'carbon offset' referred to in the Air Quality and Carbon Assessment [APP-081], please explain what consideration has been given to the generation of carbon dioxide in the manufacture and disposal of the solar panels that would form part of the Proposed Development | The Carbon Assessment has not been able to take into consideration the generation of Carbon Dioxide in the manufacture and disposal of the solar panels as manufacturers have not been able to supply this information. Section 6 of the assessment, however, has taken into consideration the most significant source of CO ₂ emissions during the construction and decommissioning phases, the construction vehicles. |
| 4. Amenity and Recreation | | | |
| 1.4.1 | Applicant | Please provide a map or maps showing the network of all definitive footpaths within a 5km radius of the centre of the Order Limits. | The Applicant has prepared a plan showing the definitive footpaths within 5km of the order limits, please refer to Document Reference 9.26 LC OTH. |
| 1.4.2 | The Applicant and North Lincolnshire Council | Please provide any counts or survey data that may have been undertaken/gathered relating to the use of definitive footpath 214. The Applicant and the Council should agree amongst one another who is best placed to answer this question. | Discussions have taken place between the Applicant and North Lincolnshire Council regarding the availability of survey data for footpath 214. Neither the Applicant nor North Lincolnshire Council hold any site specific counts for footpath 214. |
| 1.4.3 | Applicant | Please submit a map showing the route of the 'Opencast Way' walking route. | This is shown on the Public Rights of Way Plan (Document Reference 9.26 LC OTH) submitted with the Applicant's Deadline 2 submission. |
| 5. Biodiversity, Ecology and the Natural Environment | | | |
| 1.5.1 | Natural England and Lincolnshire | The Applicant's baseline ecological surveys were carried between 2017 and 2019. Are you content that the baseline ecological survey results remain reliable for the purposes of the consideration of the Proposed | Comprehensive baseline surveys were completed in 2017 and updated inspections of the site were completed in 2019 which confirmed that the habitats present on site remained as described in 2017. Consequently, it is considered highly unlikely that the ecological baseline will have changed to alter the findings, mitigation measures or ecological enhancements proposed for the scheme as presented in the ES. The Applicant would |

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| | e Wildlife Trust | Development? | advise that both Natural England and the Lincolnshire Wildlife Trust were in agreement with this conclusion in 2020. |
| 1.5.3 | The Applicant | The Extended Phase 1 Habitat Survey report [APP-091] states that the survey was in part updated in 2019. Please explain which parts of the survey were updated in 2019 and what the differences in the survey results were compared with the results obtained following the 2017 survey. | The Extended Phase 1 Habitat Survey was repeated in full in 2019. All areas of the site were resurveyed. There were no significant differences between the findings of the 2017 and 2019 surveys, and the habitats present and their potential to support ecological features remained unchanged. Minor differences included the loss of three trees, as noted in paragraph 7.6.109 of the ES Chapter (Document Reference 6.7 LC ES CH7, PINS Reference APP-064). |
| 1.5.4 | The Applicant | The ExA notes some of the species surveys may have been undertaken before the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland (2018) had been published. Can the Applicant clarify if the updated 2018 CIEEM guidelines affect the conclusions reached in Chapter 7 of the ES [APP-064]. | The Applicant confirms that the ES chapter (Document Reference 6.7 LC ES CH7, PINS Reference APP-064) was prepared (and conclusions reached) utilising the 2018 CIEEM guidelines. The CIEEM guidelines for ecological impact assessment make no specific reference to specific survey methodologies and the update to the CIEEM guidelines had no bearing upon the methodologies employed for species surveys or the scope of survey work necessary to establish the ecological baseline conditions. |
| 1.5.5 | The Applicant | Table 7.2 of Chapter 7 of the ES [APP-064] refers to the British Trust for Ornithology (BTO) Common Birds Census (CBC) method in relation to the Breeding Bird Survey [APP-093]. However, the CBC ran from 1962-2000 and has now been superseded by the BTO/Joint Nature Conservation Committee/Royal Society for the Protection of Birds Breeding Bird Survey approach. Please clarify whether the updated survey approach recommended by the BTO would affect the conclusions reached in Chapter 7 of the ES. | Although the Common Bird Census has been discontinued, the methodology is still the typical method used to survey birds at development sites. This method involves surveyors walking within 50m of all areas of a site, and mapping the location and species of all birds using standard symbols. This is an effective method to gather information on bird species assemblage and use of a particular site (including number of territories) during the breeding season. The BTO Breeding Bird Survey (BBS) is primarily intended to monitor changes in breeding birds at a large scale/population level. This method utilises pre-determined linear transects, and all species encountered within a certain distance of the transect are recorded. In comparison to the CBC methodology, the BBS methodology is less effective in gathering baseline data on bird use of a defined (non-linear) site. Hence the CBC methodology is still widely used for the purposes of impact assessment for developments whereas the BBS methodology is not. |
| 1.5.6 | The Applicant | Reference has been made to biodiversity net gain (BNG) in paragraphs 7.3.18 and 7.6.66 of Chapter 7 of the ES [APP-064]. However, based on the information presented in the ES and the Outline Landscape and Ecological Management Plan [APP-097], it is unclear to what extent BNG will be delivered by the Proposed Development. Please: a) Explain how it is intended that BNG will be delivered b) Identify the predicted value of BNG c) Explain the methodology used in the calculation of BNG and provide the workings for that calculation | The scheme will deliver a net gain for biodiversity for the lifespan of the array, principally through reversion of arable land to grassland managed under a sheep-grazed conservation regime as set out in the Outline LEMP (Document Reference 7.28A LC TA7.8). This will inherently result in net gain for biodiversity as this habitat is more ecologically valuable and diverse than arable land. A number of new hedgerows are also being planted. As such the achievement of a standard of 'net gain' has always been unambiguous and there has been no requirement to date for a formalised BNG assessment in discussions with the LPA, Natural England or PINS. Whilst to date there has been no requirement to quantify biodiversity net gain with calculations, the Applicant considers that the Biodiversity Metric v2.0, at present, is the most appropriate calculation tool. This metric is identified by CIEEM in their BNG Good practice principles for development ¹ as the most widely used and accepted methodology. The metric uses the details of the habitats currently present on the site together with details on their condition, management and connectivity to ascribe a baseline value for biodiversity. |

¹ Baker, J., Hoskin, R., Butterworth, T. (2019) Biodiversity Net Gain. Good practice principles for development. CIRIA, London.

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| | | | <p>Details of the habitats to be created (or retained, damaged or enhanced) within the final scheme are then also input together with anticipated condition and management (as achieved from management under the LEMP) and connectivity to identify a post-construction value for biodiversity. The metric takes due account of the difficulty in establishing new habitats and the time required to achieve target condition in identifying its evaluation of the biodiversity value of the new site. The tool finally compares existing baseline value and post-construction baseline value to provide a BNG score. In practice this is best represented as a percentage change from the existing baseline. We have completed an assessment of the scheme using this tool and the document is presented at Appendix 7. The biodiversity calculation tool shows the development results in substantial net gain, at 95% gain in Habitat Units and 44% gain in Hedgerow Units.</p> |
| 1.5.7 | The Applicant | Please advise whether the Proposed Development would have any impact on the adjoining forestry operations and/or affect access to the adjoining woodland during either its construction or operational phases. | <p>Please refer to the submitted report Woodland Management Plan (Document Reference 7.6 LC TA3.4, PINS Reference APP-075).</p> <p>The woodland to the north of the site (Compartments 1001, 1002a, 1002b, 1003-1009 - as shown in the above referenced document) is anticipated to be managed in line with the approved Brocklesby Estate management plan. The Proposed Development will not impact upon the ability to undertake the management works to be carried out by the Brocklesby Estate. Access for the future forestry operations within these compartments will be gained via the existing network of access tracks and woodland rides and will not rely on the construction or operational access created for the Proposed Development. The Proposed Development will not affect the network of access tracks and therefore there will be no impact upon the forestry operations.</p> <p>In relation to the small woodland area within the site (Compartment 1010 - as shown in the above referenced document) the existing main access track that crosses the site from east to west and that borders the northern edge of this compartment (where the track coincides with the public right of way) will be retained. This track provides a suitable access and extraction route for the thinning operations within this compartment. If implemented, all thinning works in this compartment, as detailed within the approved Brocklesby Estate management plan, could be undertaken within the boundary of the compartment.</p> <p>Compartment 1011 is detailed in the approved Brocklesby Estate management plan as to be clear felled. There is no obligation for these works to be carried out by the Estate. However, if they are undertaken, the proposed access track for the operation of the Proposed Development would, by agreement, provide a suitable access and extraction route for the felling operations within this compartment. Compartment 1011 is small, at only 2.05Ha, so the associated forestry operations would be relatively minor in nature (in terms of duration of works and number of processing and extraction vehicles). If implemented, all felling works could be undertaken within the boundary of the compartment.</p> <p>As stated in the aforementioned report, no detail on the management planning for the woodland to the east of the site is available to the applicant, however, any significant future management works in this woodland area will be (or will have been) assessed and controlled through the robust regulatory framework provided by the Forestry Act 1967 (and subsequent amendments) as administered by the Forestry Commission. Access for forestry operations within this woodland area will not be gained through the Proposed Development (as is the current situation).</p> <p>In summary, the Proposed Development will not impact upon the adjoining forestry operations or affect access to the adjoining woodland during either its construction or operational phases.</p> |
| 1.5.8 | The Applicant | <p>Please provide maps showing the full extent of the Order Limits relative to the whole of areas subject to each of the following designations (ie one map per designation):</p> <p>a) The Humber Estuary Special Area of Conservation (SAC)</p> | <p>The requested documentation is appended to this Statement:</p> <ul style="list-style-type: none"> • Appendix 8 - The Humber Estuary Special Area of Conservation (SAC) map & Citation • Appendix 9 - The Humber Estuary Special Protection Area (SPA) Map & Citation • Appendix 10 - The Humber Estuary Ramsar site Map & Citation |

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| | | <p>b) The Humber Estuary Special Protection Area (SPA) c) The Humber Estuary Ramsar site.</p> <p>Please also submit the citations for the SAC, SPA and Ramsar site.</p> | |
| 1.5.9 | The Applicant | <p>Paragraph 7.4.5 of Chapter 7 of the ES [APP-064] states that due to the distance and difference in habitat characteristics between the Order Limits and SPA impacts on qualifying features of this designated site are unlikely to be significant. However, the Breeding Bird Survey (BBS) [APP-093] and Wintering Bird Survey (WBS) [APP-092] record populations of Lapwing within the Order Limits. Please provide a clarification as to the impact of the Proposed Development for the qualifying features of the SPA.</p> | <p>The Applicant would highlight the follow points in response which demonstrates that the site is highly unlikely to represent important functionally-linked land for the SPA:</p> <ul style="list-style-type: none"> Lapwing are a contributory species of the non-breeding waterbird assemblage of the SPA and not a qualifying feature in their own right. The peak wintering count recorded (109) is 0.4% of the population associated with the SPA & Ramsar. It is noted that the SPA data sheet notes a population size of 22765 for wintering population while the Ramsar citation notes the same population number 22765 for breeding population. Lapwing were absent from the site during 50% of wintering bird survey visits. The evidence indicated casual use of the site during winter in conjunction with farmland elsewhere. Lapwing were widespread and ubiquitous across farmland and there is a high level of uncertainty as to whether or not this flock was linked to the overwintering Humber Estuary population. In any event, the peak numbers of birds recorded on site represents an insignificant proportion of the population (i.e. less than 1%). |
| 1.5.10 | The Applicant | <p>Section 7.9 of Chapter 7 of the ES [APP-091] identifies potential cumulative effects on farmland birds that utilise land within the Order Limits, the proposed Conesby Solar Farm and Raventhorpe Solar Farm sites. However, no definitive conclusion is provided regarding the potential significance of this cumulative effect. Please provide a definitive conclusion, and justification for reaching that conclusion, on the potential significance of the cumulative effect for farmland birds.</p> | <p>The Applicant would highlight the following points in response:</p> <ul style="list-style-type: none"> All three sites have provided or will provide mitigation to address potential impacts on ground nesting birds, principally through improvement in habitat quality for foraging by ground nesting species but also by incorporating open spaces suitable for use by ground nesting species. It is anticipated that for farmland bird species potentially displaced by solar panels at all three sites, breeding success and winter survival of birds nesting in the surrounding landscape will increase. This is because operational solar arrays, correctly managed (as provided for in the LEMP), will provide valuable foraging opportunities for ground nesting species, and birds in general, throughout the year. The RSPB notes that the primary drivers behind declines in the populations of skylarks in the UK is as a result of changing agricultural practice and the move from spring to winter cereals as well as intensified grassland management². The low intensity management approach for areas of grassland within the array together with the winter foraging opportunities that these grasslands will provide will help to address some of the primary drivers behind ground nesting bird decline. The RSPB do not highlight that a lack of suitable nesting sites is a reason for decline, although inappropriate grassland management is highlighted as a contributing factor. Given the arrays will provide grassland habitats with potential to be used by foraging skylark (both in winter and in summer) and given that the arrays all offer open spaces to provide opportunities for ground nesting species it is anticipated that the solar arrays all offer adequate mitigation for one of the primary drivers behind skylark decline. Little Crow and Conesby also provide areas of open land which are managed to provide optimal conditions for ground-nesting birds, ensuring that a proportion of the birds of open farmland recorded at these sites will be retained. On the basis of the above it is concluded that there are no significant cumulative impacts considered likely on farmland birds. <p>As described within 7.6.126 – 7.6.128 of the ES chapter (Document Reference 6.7 LC Es CH7, PINS Reference APP-064) the potential effects of solar arrays on farmland birds are somewhat poorly understood.</p> |

² <https://www.rspb.org.uk/our-work/conservation/conservation-and-sustainability/farming/advice/helping-species/skylark/>

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| | | | It is possible that the degree of displacement of farmland bird species assumed to occur on all three sites may not be as great as anticipated. The ES therefore adopts a precautionary approach. |
| 1.5.11 | The Applicant | Please explain how the provision of the silt fencing/temporary drainage channels and a buffer zone of at least 6 metres to be established from the top of ditch banks, referred to in paragraphs 7.6.22 and 7.6.88 in Chapter 7 of the ES [APP-064] would be secured by any made Development Consent Order as neither of those measures have not been referred to in the outline CEMP [APP-077], the outline Construction Environmental Management Plan for Biodiversity [APP-096] or the Outline Landscape and Ecological Management Plan [APP-097] | <p>Temporary fencing to demarcate protective buffers 6m from the ditch banks is prescribed within the CEMP: Biodiversity (Document Reference 7.27 LC TA7.7, PINS Reference APP-096) (Method Statement 2).</p> <p>Silt fencing/ temporary drainage channels are also prescribed in this document (under Method Statement 3) as potential measures to be adopted to control silt. It is intended that the use of these temporary measures would be only be employed in localised areas where problems with silt/run-off are identified during periods of wet weather.</p> <p>Compliance with the CEMP is secured through requirement 8 of the dDCO. Requirement 6 also requires detailed design approval prior to commencement of development which must accord with the principles and assessments of the ES. The Applicant considers that these measures adequately secure these measures</p> |
| 1.5.12 | The Applicant | With respect to the pond 100 metres to the west of the Order Limits referred to in in paragraph 7.4.52 of Chapter 7 of the ES [APP-064], please provide evidence of the information provided by the Environmental Manager for British Steel that the potentialHydrogen (pH) level for this pond would make the presence of Great Crested Newts unlikely. | <p>The Applicant initially received verbal advice regarding that the pH within the ponds. The Group Environmental Manager for British Steel confirmed on 07/05/21 that monitoring of the pond indicates that it is between 10 and 13 which is very alkaline and significantly reduces the likelihood of encountering newts.</p> <p>Access to the pond was primarily declined on the basis that there was no safe access to the pond. The pond lies within a former quarry and active landfill. In the attached correspondence dated 17/05/19, the Group Environment Management, details our request for access and refusal (Appendix 11).</p> |
| 6. Draft Development Consent Order (DCO) | | | |
| 1.6.1 | The Applicant | <p>Background</p> <p>In Article 2 (Interpretation) of the draft Development Consent Order (dDCO) [APP-045] includes a definition for 'commence/commencement/commenced' that would exclude theundertaking of any 'site preparation works' associated with the Authorised Development. The Explanatory Memorandum (EM) [APP-046] at paragraph 5.3(ii) explains that under the intended definition for commencement that would allow for the undertaking of pre- construction surveys, monitoring and site investigations.</p> <p>Questions</p> <p>a) Would the undertaking of pre-construction surveys, monitoring and site investigations be the only activities intended to be subject to the exclusion referred to in the proposed definition for commence/commencement/commenced?</p> | <p>a) No, the exclusion referred to in the proposed definition for 'commence/commencement /commenced' is for site preparation works. "site preparation works" are defined later in Article 2 as operations consisting of pre-construction surveys and/or monitoring, site clearance, demolition work, archaeological investigations, environmental surveys, investigations for the purpose of assessing ground conditions, diversion and laying of services, erection of any temporary means of enclosure, the temporary display of site notices or advertisements.</p> |

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| | | <p>b) If the answer to part a) of this question is no, please explain what other activities are intended to come within the exclusion for the proposed definition for commence/commencement/commenced.</p> <p>c) For the purposes of clarity, should any activities to be excluded from the proposed definition for commence/commencement/commenced be expressly defined in Article 2 of the dDCO?</p> | <p>b) See definition in a) above</p> <p>c) The Applicant considers the definition adds sufficient clarity for the terms to be understood.</p> |
| 1.6.2 | The Applicant | With respect to Article 14 (Certification of plans etc) in the dDCO [APP-045] the Applicant is requested to ensure that plans and documents listed in this Article are kept up to date whenever an updated version of the dDCO is submitted as an Examination document. | This is noted and the Applicant will ensure the article is kept up to date as appropriate. |
| 1.6.3 | The Applicant | Please explain why Article 19 (Application of landlord and tenant law) in the dDCO [APP-045] is necessary. | This was set out in the Applicant's Response 4 c) in the Applicant's Post Hearing Submissions (ISH1) Deadline 1 (Document Reference 9.17 LC OTH, PINS Reference REP1-008). |
| 1.6.4 | The Applicant and Northern Powergrid/Power Grid | <p>With respect to the decommissioning of the Proposed Development Requirement 4 of the dDCO [APP-045] refers to the proposed substation not being decommissioned. The Outline Decommissioning Strategy [APP-078] advises that the substation would not be decommissioned because it would be the property of District Network Operator (Northern Powergrid).</p> <p>What purpose would the District Network Operator have for a retained substation following the decommissioning of the rest of the Proposed Development?</p> | The Applicant's response is set out in its ISH1 submission at question 3h iv (Document Reference 9.17 LC OTH, PINS Reference REP1-008). The Outline Decommissioning Plan has also been updated to refer to the Northern Powergrid position regarding the substation (Document Reference 7.9A LC TA4.2) |
| 1.6.5 | The Applicant and North Lincolnshire Council | <p>With respect to Requirement 9 (outline Construction Traffic Management Plan [CEMP]) of the dDCO [APP-045]:</p> <p>a) In Requirement 9(2)(b) what does 'adjoining highway' mean, should the reference be to the public highway? Would the precision of this part of the Requirement be aided by referring to specific road names and/or numbers?</p> <p>b) In Requirement 9(2)(c), what would be the purpose of undertaking, a '... condition survey of any road ...', as there is no requirement to do anything further to respond to the results of the condition survey? Is Requirement 9(2)(c) necessary and/or incomplete?</p> | <p>a) 'adjoining highway' means public highway and in requirement 9(2)(b) this is referring to the B1208, B1207 (site access) and A18 (route from M180 Motorway). The dDCO has been amended to refer to 'adjoining <i>public</i> highway B1208, B1207 and A18 Document Reference 3.1B LC DCO.</p> <p>b) This was set out in the Applicant's Response 4 c) in the Applicant's Post Hearing Submissions (ISH1) Deadline 1 (Document Reference 9.17 LC OTH, PINS Reference REP1-008)</p> |

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| 1.6.6 | The Applicant | With respect to Requirement 10 (outline Landscape and Ecological Management Plan) of the dDCO [APP-045]: a) Is there any duplication with Requirement 6? b) In Requirement 6(2)(b) what does 'gapping up' mean, could an alternative form of wording be used or should gapping up be defined in the Interpretation section set out under Article 2 or Requirement 1 of Part 1 of Schedule 2? | a) This was set out in the Applicant's Response 4 c) in the Applicant's Post Hearing Submissions (ISH1) Deadline 1 (Document Reference 9.17 LC OTH, PINS Reference REP1-008). Gapping up' is a known term in hedgerow restoration and refers to filling any breaks over 1m in the hedgerows to develop a continuous hedge. To avoid the use of technical terminology or the need to add a definition the dDCO has been amended to refer to "re-planting of any breaks (gaps) in excess of 1m in existing native hedgerows". |
| 1.6.7 | The Applicant and North Lincolnshire Council | With respect to Requirement 11 (Construction hours) of the dDCO [APP-045]: a) Is there a need for construction hours to be stated in a freestanding Requirement or is this a matter that could be included within the Construction Environmental Management Plan subject to Requirement 8? b) If Requirement 11 is to be retained as a freestanding requirement in any made DCO, should the tailpiece phrase '... unless otherwise agreed by the local planning authority' be deleted? | a) This requirement can be seen in several made DCO's (see for example Riverside Energy Park Order 2020 (requirement 12) and The Southampton to London Pipeline Development Consent Order 2020 (requirement 14). The details are also included in the CEMP at paragraph 5.3 (Document Reference 7.8A LC TA4.1) and construction deliveries are outlined at paragraphs 5.1 & 5.16 of the CTMP (Document Reference 7.36 LC TA9.2, PINS Reference APP-105) but they are included as a separate requirement in the dDCO because this puts the working hours on the face of the Order for the benefit of the public. b) The Applicant considers that Requirement 11 should be a freestanding requirement and the tail piece should also be retained because it would be acceptable for a variation of this nature to be agreed by the Local Authority and it will provide flexibility to cover any unforeseen circumstances that may arise. It would be disproportionate to require an amendment of the DCO for this and the Applicant understands that the Local Authority shares this view. |
| 1.6.8 | The Applicant | With respect to Requirement 13 (Archaeology) of the dDCO [APP-045]: a) In Requirement 13(1) would the wording be clearer if 'Not to commence ...' was deleted and replaced with 'The authorised development shall not be commenced ...'? b) In Requirement 13(2) would the wording be clearer if 'Not to permit digging in ...' was deleted and replaced with 'No digging shall be undertaken within'? c) In Requirement 13(4) should the reference to an earlier clause of this Requirement be to (3) rather than (2)? | a) Yes, this was set out in the Applicant's Response 4 c) in the Applicant's Post Hearing Submissions (ISH1) Deadline 1 (Document Reference 9.17 LC OTH, PINS Reference REP1-008). b) Yes, this was amended at Deadline 1 (Document Reference 3.1A LC DCO, PINS Reference REP1-003) c) Yes, this was amended at Deadline 1 (Document Reference 3.1A LC DCO, PINS Reference REP1-003) |
| 1.6.9 | The Applicant and North Lincolnshire Council | Requirement 14 (Protected species) of the dDCO [APP-045], please review the draft wording for completeness and: a) Is there a need for the provisions of Requirement 14(2) to be contained in a freestanding subparagraph or could the inclusion of 'any site preparation works' within what is meant by commencement simply be stated as 'No work, including site preparation works, shall be commenced in any phase until a final pre- | a) The Applicant has reviewed this wording and requirement 14 (2) has been deleted and 14 (1) amended as proposed (Document Ref 3.1B LC DCO) b) The requirement has been amended to ensure consultation with the relevant body dependent upon the species concerned. (Document Ref 3.1B LC DCO) |

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| | | <p>construction survey has been carried out for that phase ...'</p> <p>b) In Requirement 14(3), in the event of a survey finding a protected species to be present, why prior to a mitigation scheme being submitted for approval by North Lincolnshire Council would it be necessary for a pre-consultation to be undertaken with the Council as well as Natural England?</p> | |
| 1.6.10 | The Applicant | <p>With respect to Requirement 15 (Temporary diversion to public footpath) of the dDCO[APP-045]:</p> <p>a) In the interests of precision and drafting consistency in Requirement 15(1) could 'Notto commence any phase of the authorised development or any decommissioning...' be deleted and replaced with 'The authorised development must not be commenced in any phase or any decommissioning be undertaken ...'?</p> | a) This has been amended, please see the DCO Changes Tracker Deadline 1 (Document Reference 3.5 LC DCO, PINS Reference REP1-007). |
| | | b) In Requirement 15(2)(a) does the reference to 'length' relate to distance, time or both? | b) This has been amended see the DCO Changes Tracker Deadline 1 (Document Reference 3.5 LC DCO, PINS Reference REP1-007). |
| 1.6.11 | The Applicant and North Lincolnshire Council | <p>With respect to the 'Procedure for Discharge of Requirements' set out in Part 2 of Schedule 2 of the dDCO [APP-045] please provide explanations within an updated version of the EM [APP-046] and make any amendments to the dDCO, as necessary, to address the following matters:</p> <p>a) Identify all of the organisations that would constitute a 'discharging authority' for the purposes of Part 2 Schedule 2 of any made DCO;</p> <p>b) Whether the heading for Part 2 of Schedule 2 is correctly titled, given that during the course of Issue Specific Hearing 1 it was explained that some consents from discharging authorities would concern Articles within any made DCO and not just Requirements contained in Part 1 of Schedule 2 of the dDCO.</p> <p>c) Why in Paragraph 21(1)(c) are:</p> <p>i. Appeals concerning the use of sections 60 and 61 of the Control of Pollution Act 1974 being referred to, when there is an appeal mechanism available under that legislation via the Magistrates Court system?</p> <p>ii. If an appeal was to be dismissed, what</p> | <p>a) A 'discharging authority' for the purposes of Part 2 Schedule 2 18 (1) (a) comprises the local authority, Environment Agency, Natural England, Humberside Fire Service and the HSE.</p> <p>b) The heading for Part 2 Schedule 2 follows the recommended wording in Appendix 1 of Advice Note 15. This only covers the discharge of requirements. The discharge of consents under the Articles is dealt with in the articles themselves (e.g. see Article 9).</p> <p>c) i. this was set out in the Applicant's Response 4 c) in the Applicant's Post Hearing Submissions (ISH1) Deadline 1 (Document Reference 9.17 LC OTH, PINS Reference REP1-008) and seeks to streamline the appeal process thus minimising the risk to timely delivery of the authorised development</p> <p>ii. In line with the comments made at Deadline 1 it is open at the commencement of an appeal for the Applicant to use either the Magistrates Court or the appeal process set out in the DCO and once that decision is made that procedure will be progressed. Where the Applicant has taken the decision to make an appeal to the discharging authority using the DCO process set out in Part 2, Schedule 2, paragraph 21(9) states that the decision of the appointed person on an appeal is final and binding unless proceedings are brought by way of judicial review. The terms of the appeal process therefore prevent the matter being brought again before the Magistrates Court at a later stage if the appeal was dismissed.</p> |

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| | | implications might that decision have for the resolution of the matter if it was then to be remitted to the Magistrates Court as a contravention of sections 60 or 61? | |
| 7 | Historic Environment | | |
| 1.7.1 | The Applicant | Please advise what mitigation measures would be in place during the decommissioning of the Proposed Development to safeguard any buried archaeological resources within the Order Limits. | <p>The extensive archaeological assessment and field evaluation works have revealed a small number of features of archaeological interest. These have been protected through design, by excluding the most sensitive locations from intrusive development activities or through the layout of the more intrusive elements designed to avoid archaeological features. It is accepted that an archaeological watching brief will be undertaken in some parts of the site and that this activity will have the potential to identify further areas of archaeological interest. However, given the nature of the archaeology present (relatively low level), the nature of the proposed development (relatively low impact) and the activities involved in decommissioning (pulling piles will not allow any archaeological features/deposits to be identified/recorded) it is not considered necessary at this stage to introduce any specific requirement for archaeology in the decommissioning stage. Should further areas/features of archaeological interest be identified during the construction phase this approach will be reviewed and, in agreement with the North Lincolnshire Council Archaeologist, be modified in an appropriate manner.</p> <p>It should be noted that the Outline Decommissioning Strategy (Document Ref 7.9A LC TA4.2) specifically allows for updates to the plan to be enacted in the event that new archaeological features are found (para 3.14).</p> |
| 8. | Landscape and Visual Effects | | |
| 1.8.1 | The Applicant | Given that the assessment viewpoint photographs were taken in the summer, when hedges and trees were in leaf, the Applicant is requested to submit photomontages representative of the winter months. | <p>The Applicant does not have baseline photography taken during the winter months from which to construct representative photomontages in accordance with best practice guidance. Whilst it would be possible to add winter vegetation (e.g. trees and hedges) to summer baseline photography, this would represent a departure from best practice³ and consequently would not form a robust basis for assessment.</p> <p>The Applicant addressed the robustness of the photomontages in its post-hearing submissions at Deadline 1 (Document Reference 9.17 LC OTH, PINS Reference REP1-008), and clarified that the effectiveness of the proposed visual mitigation measures will not be significantly different between the Summer and Winter months, even though the mitigatory planting will be deciduous, due to the effects of significant woodland screening. Consequently the LVIA judgments will not be materially affected by seasonality.</p> |
| 1.8.4 | The Applicant | The Landscape and Visual Impact Assessment references "Users of publicly accessible paths" and "Users of the | There are no cycleways or bridleways within the site nor within the immediate surroundings of the site. |

³ Guidelines for Landscape and Visual Impact Assessment (GLVIA) 3rd edition. Landscape Institute and Institute of Environmental Management & Assessment 2013 – Chapter 8 Presenting information on landscape and visual effects.

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| | and North Lincolnshire Council | transport network" as visual receptors [paragraphs 6.3.43 to 6.3.46 of PDA-006]. The assessment of the impact of the Proposed Development is confined to users of footpaths and motorists. Other non-motorised users such as cyclists and equestrians are not referenced. What is the potential for effects on cyclist and equestrian receptors? | <p>The Public Rights of Way Plan P17-0718.104A shows a single cycleway to the west, (National Cycle Network Route 169), the majority of this route lies outside the screened ZTV. Fieldwork established that the potential visibility of the site in the wider landscape is very limited. Any users gaining any views of the site from this route would not experience any more than a negligible visual effect.</p> <p>The Public Rights of Way Plan P17-0718.104A shows Public Bridleways transposed from North Lincolnshire's Definitive Map. The routes to the north do not fall within the screened ZTV, viewpoint 4 to the north of ROXB153 recorded no change to views from this location due to intervening screening. SCUN196 to the south west falls within the ZTV fieldwork associated with the nearby viewpoint 6. The assessment recorded no change to views from this location due to intervening screening.</p> |
| 1.8.5 | The Applicant | On several occasions the assessment of landscape and visual effects in Chapter 6 of the ES [PDA-006] distinguishes between 'effects within the development site and its immediate locality and surroundings' and 'effects beyond the immediate vicinity of the development site/site environs' (e.g. 6.4.11 to 6.4.14). The Applicant is requested to clarify precisely what is meant by the distinction that has been drawn, with reference to the formal study area that has been identified for the Proposed Development. | The extent of the immediate environs of the site, (within the wider study area) are defined principally by the screening effects of the surrounding woodland and adjacent industrial site and vary in terms of direction. To the east this is limited to the site boundary by the existing woodland. The same is the case to the north and south bar two isolated narrow view corridors one approximately 400m deep to the north east and a further 350m deep view corridor to the south west. On the western boundary the industrial context of the steel works and the lack of physical and visual access due to regenerating vegetation and industrial infrastructure means that this extends to approximately 10m from the site boundary. |
| 1.8.6 | The Applicant | The construction and decommissioning visual effects are described relative to operational effects, e.g. moderate temporary visual effect "over and above" the permanent visual effects described for operation [Table 6.7 PDA-006]. For clarity, please confirm what the level of significance for the construction and decommissioning phase effects are considered to be relative to the baseline. | The visual effects are identified as major for users of the PROW passing through the Order limits. Due to increased site movements during construction and decommissioning, including vehicles and personnel and materials, these would be slightly elevated above the major operational effects to an additional temporary moderate effect but would still result in a major effect overall at construction and decommissioning. |
| 1.8.7 | The Applicant | The proposed visual mitigation measures include 'Sowing of wildflower seed along the margins between the footpath and the hedgerows/security fence boundaries' [paragraph 6.5.2 of PDA-006]. Please clarify how it is proposed that mitigation would be secured. Appendix 6.5 'Detailed Landscape Proposals' [APP-090] shows the proposed landscape mitigation, however, wildflower verges are not clearly depicted. Please provide an updated version of Appendix 6.5 showing all the proposed visual mitigation. | <p>The proposed mitigation measures would be secured by Requirement 10 of the draft DCO. Drawings in Appendix 6.5 Doc Ref 7.21A, Detailed Landscape Proposal, (Detailed Landscape 7,21A LC TA6.5) have been revised to show more clearly the proposed wildflower verges to the footpath.</p> <p>The revised drawing accompany the applicant's Deadline 2 submission (Document Reference 7.21A LC TA6.5).</p> |
| 1.8.8 | The Applicant | At paragraph 6.4.44 of Chapter 6 of the ES [PDA-006], an assessment of visual effects on the residential receptor Spring Wood Cottage concludes with a moderate effect which is judged to be not significant. The ES states that there is a small gap in the intervening vegetation that 'could potentially be mitigated with a section of new hedgerow planting which would reduce the potential magnitude to very low and the resulting effect to moderate/minor which is not | <p>The Applicant has committed to providing the proposed mitigation measure and this is shown on Landscape and Ecological Management Proposals Drawing at Appendix A of the LEMP (Document Ref 7.28A TA7.8)</p> <p>The Applicant understands that Spring Wood Cottage is also known as Springwood Lodge.</p> <p>The proposed mitigation measures would be secured by Requirement 10 of the draft DCO</p> |

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| | | significant' (paragraph 6.4.44). It is not clear if the Applicant is committed to providing that mitigation and how its provision would be secured. The Applicant is requested to clarify this matter | |
| 1.8.9 | The Applicant | The Outline Landscape and Ecological Management Plan (LEMP) (ES Appendix 7.8) [APP-097] includes a monitoring methodology (Management Prescription 14, p.32). However, the monitoring methodology is focused on specific plant species and it is not clear whether the landscape screening function of the mitigation planting will also be monitored. Please clarify whether it is intended that the landscape screening function of the mitigation planting would also be monitored. | The landscape screening function of the mitigation planting would also be monitored under the LEMP. For hedgerow establishment Years 1,2,3 5 & 10 – 10 locations will be selected across the site to record growth data of hedgerow material over a 5m section in terms of height, width and annual average growth extension, (prior to cutting). Photography will be taken to record effectiveness of screening function. An updated Outline LEMP accompanies the Applicant's Deadline 2 submission (Document Reference 7.28A LC TA7.8). |
| 1.8.10 | The Applicant | At paragraph 13 of Relevant Representations RR-006, RR-008, RR-009, RR-014 and RR-015 reference is made to the use of the access track for the Proposed Development having a visual impact for the owners and occupiers of Heron Lodge. Please comment on the nature and significance of any visual effects for the owners and occupiers of Heron Lodge that would be associated with the use of access track during the construction, operational and decommissioning phases for the Proposed Development. | <p>Heron's Lodge is a residential property within a complex of buildings formed within two clearings to the south of the access track to the site. The residential property is located approximately 55m from the access track. The curtilage/garden areas extend to within approximately 30m of the access track. Intervening, mature woodland extends between the extents of the property and the track.</p> <p>Existing views of the track from the property through a band of approximately 30m deep woodland are likely to be very limited and heavily filtered. The track is currently used for access for the current agricultural uses associated with cultivation, seeding, spraying etc. and harvesting. Glimpsed views of existing agricultural vehicle movements may be gained which may be more frequent at certain times such as harvest. An area currently used for the storage of large straw bales is located at the western end of the track. These are typically removed from site using HGVs.</p> <p>In the assessment criteria set out in Appendix 6.1 Residential receptors, (residents at their property) are considered to be of high sensitivity. During the operational stages there will be vehicle movements along the track associated with the agricultural operations associated with the land under and around the panels which will be a combination of rotational sheep grazing, meadow cutting and hedgerow management and the operation of the facility. There would be no physical change to the track or boundary and the track would continue to be heavily screened from this viewpoint. The magnitude in change in terms of availability and frequency of views of vehicles accessing and leaving the site from Heron Lodge during the operational stages is judged to be very low. This would result in a moderate/minor visual effect on the residents of Heron's Lodge which is not significant.</p> <p>During construction and decommissioning, vehicle movements will temporarily alter in terms of type and frequency increasing the amount of HGV's and LGV's accessing and leaving the site on a daily basis. Views of these vehicles will continue to be heavily filtered albeit more frequent and generally larger, (bar the vehicles usually associated with the straw bale movements). The magnitude of change to views towards the track is considered to be low however resulting in a moderate visual effect which is judged to be not significant.</p> |
| 9. Noise | | | |
| 1.9.2 | The Applicant | Please explain what noise effects during the construction, operational and decommissioning phases for the Proposed Development associated with the use of the access track that passes to the north of Heron Lodge have been assessed in the Noise | <p>The Applicant notes that the following comments have been made regarding the issue of noise by representatives of the Local Authority:</p> <ul style="list-style-type: none"> Environmental Health Response (ref PLU 009333) associated with Pre-Planning Application (ref PRE/2018/137) included the following comments on noise: |

| ExQ1 | Question to: | Question: | Applicant's Response |
|------------|-----------------------------------|--|--|
| | | Impact Assessment [APP-085]. In responding to this question please make comparisons between the daily vehicular activity generated by the current use of the access track and the expected use during the construction, operational and decommissioning phases for the Proposed Development. | <p>o "However, given the location and nature of the proposed development, it is likely that operational noise will not give rise to significant adverse impact provided that any necessary mitigation measures are included. This department would expect a planning application to include details of operational noise sources and predicted noise levels at relevant locations."</p> <ul style="list-style-type: none"> • The Statement of Common Ground (Document Ref 9.4 LC OTH, PINS Ref APP-112) includes the following statement: <ul style="list-style-type: none"> o "Noise is not expected to constitute a significant impact on surrounding receivers (with mitigation measures recommended accordingly), and a supplementary report to the Environmental Impact Assessment is therefore considered appropriate." <p>On the basis of the above comments, earlier revisions of the noise impact assessment report have sought to identify areas where mitigation is likely to be required, with recommendations and summaries presented accordingly. Further to an increased focus on noise associated with the proposed access track, full summaries of the assessments of this noise source are now included in updated report (Document Reference 7.16A LC TA4.9).</p> <p>The updated report includes the calculations to demonstrate that no significant effects are expected from the proposed use of the Access Track during construction, operation and decommissioning. Due to the existing use of the Access Track (as an access track for agricultural operations), a comparison between flow rates was not considered to be a reliable way of assessing this and so alternative methodologies have been used. This is clarified in the report.</p> <p>The Applicant has also updated requirement 6 of the dDCO (detailed design approval) (Document Reference 3.1B LC DCO) to ensure that the noise mitigation measures proposed in paragraph 6.2 of the Noise Impact Assessment (Document Reference 7.16A LC TA4.9).</p> |
| 1.9.3 | The Applicant | In section 2 of the Noise Impact Assessment [APP-085] noise Receivers 1 to 4 have been referred to. Please provide the full name for each of those receivers. | The names of the Receivers have been updated in Section 2 of the revised Noise Impact Assessment submitted at Deadline 2 (Document Reference 7.16A LC TA4.9) |
| 1.9.4 | The Applicant | Please explain why 'Receiver 3' has been considered to be a representative location for the assessment of the construction and decommissioning noise effects for the Proposed Development. | With the Access Track calculations now included, two receivers are now assessed. These are defined and justified in more detail in the updated Noise Impact Assessment (Document Reference 7.16A LC TA4.9). |
| 10. | Transportation and Traffic | | |
| 1.10.1 | The Applicant | Please provide baseline traffic count data for the section of the A18 and the B1208 which it is proposed would form part of the construction route shown in Figure 9.1 in Chapter 9 of the ES (Transport and Access) [APP-066] | <p>In order to provide the most recent baseline data, an Automatic Traffic Count survey was undertaken for the A18 and B1208. Data was collected over a seven day period from Sunday 9th May 2021 to Saturday 15 May 2021. The data shows the following:</p> <p>A18 Weekday Average (24 hrs)</p> <ul style="list-style-type: none"> • Eastbound – 5,734 vehicles • Westbound – 5,483 vehicles • Total (two-way) – 11,217 vehicles <p>B1208 Weekday Average (24 hrs)</p> |

| ExQ1 | Question to: | Question: | Applicant's Response |
|-------------------------------|---------------|--|---|
| | | | <ul style="list-style-type: none"> • Northbound – 712 vehicles • Southbound – 707 vehicles • Total (two-way) – 1,419 vehicles <p>The survey data is provided at Appendix 12.</p> |
| 11. Water and Flooding | | | |
| 1.11.1 | The Applicant | Has the Flood Risk Assessment and Drainage Strategy [APP-072] considered the Northand North East Lincolnshire Strategic Flood Risk Assessment (SFRA) (2011)? | <p>During the initial preparation of the Flood Risk Assessment and Drainage Strategy (FRADS) (Document Reference 7.3 LC TA3.1, PINS Reference APP-072), the North and North East Lincolnshire (NNE) Strategic Flood Risk Assessment (SFRA) (2011) was not considered, as the Order Limits are in Flood Zone 1 (FZ1) and are not susceptible to elevated flood risks. The requirements of the National Planning Policy Framework & Planning Practice Guidance were considered, which are ultimately the guidance to which the SFRA refers for sites such as the one in question, in FZ1.</p> <p>We have subsequently reviewed the content and requirements of the NNE SFRA and can confirm that requirements relating to sites in FZ1 are satisfied by the submitted FRADS (Document Reference 7.3 LC TA3.1, PINS Reference APP-072).</p> <p>The requirements of the SFRA for sites in FZ1 are:</p> <ul style="list-style-type: none"> • Consider flooding from other sources as well as from river and seas flooding – Refer to Section 6 of FRADS (Document Reference 7.3 LC TA3.1, PINS Reference APP-072). • Consider the potential to increase flood risk elsewhere through the addition of hard standing – Refer to Section 5 & Section 7 of FRADS (Document Reference 7.3 LC TA3.1, PINS Reference APP-072). • Consider the effect of new develop on surface water run-off – Refer to Section 7 of FRADS (Document Reference 7.3 LC TA3.1, PINS Reference APP-072). <p>The SFRA states "FRAs for sites in Flood Zone 1 will generally be limited to addressing drainage issues, including SUDS, only."</p> <p>The site specific FRADS addresses the above issues for the Order Limits.</p> |

APPENDIX 1: THE UK SOLAR PV STRATEGY PART 1: ROADMAP TO A BRIGHTER FUTURE



Department
of Energy &
Climate Change

UK Solar PV Strategy Part 1: Roadmap to a Brighter Future

October 2013



Contents

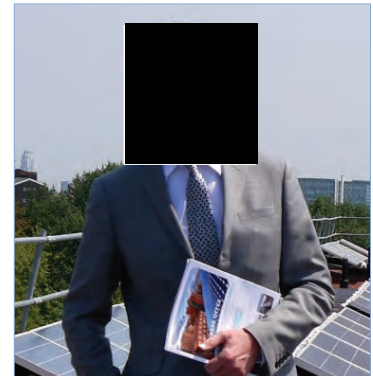
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Foreword

by the Rt. Hon. Gregory Barker MP, Minister of State for Energy and Climate Change

This is a truly exciting time for UK solar. In the last three years, under the Coalition Government, the sector has gone through a period of profound change, challenges and staggering growth.

We have deployed almost 2.5GW of solar and installed solar PV on nearly half a million homes as well as thousands of businesses and community sites.



The DECC central forecast estimates that the UK is likely to reach 10GW by 2020. But I believe we can go faster and further.

Along with many in the industry, I think that up to 20GW of deployed solar is not only desirable but also potentially achievable within a decade. But we will only meet such an ambitious level of deployment if we all work in even closer partnership and achieve grid parity sooner.

Delivering such an ambition will require even greater innovation, new skills, relentless downward pressure on costs - right through the whole supply chain and a much more dynamic grid network - all of which we will seek to examine in the full strategy which we will publish early next year.

But big ambition must also be matched by a much greater sensitivity to impacts on landscape, visual amenity and biodiversity. Local communities must be willing partners in solar expansion; not just consulted but respected and where ever possible, financial partners in local projects.

The global solar sector is going through a period of hyper-change. We must make sure we grasp solar PV's full potential, along with the British jobs and wide economic and environmental benefits that it can bring, as we compete with growing confidence in the global race.

Rt. Hon. Gregory Barker MP



Executive Summary

1. Solar PV is one of the eight key renewable energy technologies that can help to create a clean, balanced UK energy mix¹. It has significant advantages: it is versatile and scalable, with deployment possible in a wide range of locations including domestic and commercial buildings and where appropriate on the ground; solar projects can be developed and installed very quickly; and the fuel - solar radiation, is free.
2. The UK has seen a significant level of solar PV deployment together with significant cost reduction over recent years with installed costs estimated to have fallen around 50 per cent between 2010 and 2012². The ability to deliver further reductions in the installed costs of solar PV will determine the level of sector growth and the ability for the levelised cost of solar PV to become competitive with other low-carbon electricity sources.
3. As of June 2013, the UK now has 2.4GW installed capacity generating 1.4TWh during July 2012 to June 2013³. The Government is committed to substantially increasing the deployment of renewable energy across the UK and recognises the potential role and contribution that solar PV can play in helping to meet the UK's target of 15 per cent renewable energy from final consumption by 2020¹, and in supporting the decarbonisation of our economy in the longer term.
4. The extensive deployment of solar PV across the UK has become increasingly visible to the public at all scales and is among the most popular renewable energy technologies. Recently solar received the highest public approval rating of all renewable energy technologies at 85 per cent⁴. We need to ensure that this level of support can be maintained – including by ensuring that solar PV is appropriately sited, and allow for greater community engagement. We do, however, expect on-going deployment of the technology to continue at all scales.
5. All these factors mean that the time is right for the Government to set out its vision of the strategic direction for solar PV in the UK – making sure that our policies support the appropriate deployment in a sustainable, cost-effective way. We need to provide certainty to investors, solar developers, and the households, communities and businesses affected by solar PV.

¹ DECC (2012) UK Renewable Energy Roadmap Update 2012
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/80246/11-02-13_UK_Renewable_Energy_Roadmap_Update_FINAL_DRAFT.pdf

² Provided as part of the FITs Comprehensive Review by Cambridge Economic Policy Associates (CEPA) Cambridge Economic Policy Associates Ltd and Parsons Brinckerhoff (2011) Updates to the Feed-in Tariff Model Documentation of Changes for solar PV Consultation
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48136/2174-cepa-paper.pdf
 and Parsons Brinckerhoff (PB) (in October 2011²) and by PB (in May 2012) Parsons Brinckerhoff (2012) Solar PV Cost Update
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/43083/5381-solar-pv-cost-update.pdf

³ Energy Trends, September 2013, table ET 6.1 <https://www.gov.uk/government/publications/renewables-section-6-energy-trends>

⁴ DECC (2013) Public Attitudes Tracker Wave 5
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/198722/Summary_of_Wave_5_findings_of_Public_Attitudes_Tracker.pdf

6. This Roadmap sets out four guiding principles, which form the basis of Government's strategy for solar PV. These principles are:
 - I. Support for solar PV should allow cost-effective projects to proceed and to make a cost-effective contribution to UK carbon emission objectives in the context of overall energy goals** – ensuring that solar PV has a role alongside other energy generation technologies in delivering carbon reductions, energy security and affordability for consumers.
 - II. Support for solar PV should deliver genuine carbon reductions that help meet the UK's target of 15 per cent renewable energy from final consumption by 2020** and in supporting the decarbonisation of our economy in the longer term – ensuring that all the carbon impacts of solar PV deployment are fully understood.
 - III. Support for solar PV should ensure proposals are appropriately sited, give proper weight to environmental considerations such as landscape and visual impact, heritage and local amenity, and provide opportunities for local communities to influence decisions that affect them.**
 - IV. Support for solar PV should assess and respond to the impacts of deployment on: grid systems balancing; grid connectivity; and financial incentives** – ensuring that we address the challenges of deploying high volumes of solar PV.
7. This Roadmap sets out these principles – covering what has been done to date, and where further work is needed. Further work will be completed ahead of publishing the Solar PV Strategy in spring 2014 which will assist the development of policy and the growth of the sector.
8. This further work will be framed by the Solar PV Strategy Group and input from the Task Forces. It will include analysis and feasibility of cost reduction potential; analysis of the life cycle emissions of solar PV; greater understanding as to the likely proportions of domestic, industrial and ground mounted solar PV by 2020; and further analysis to explore how to manage the grid systems balancing with significant levels of solar PV deployment.

Section 1 - Introduction

Solar PV: The Policy Context

9. Solar photovoltaic (PV) technology is a mature, proven technology and is a reliable source of renewable energy with an important role to play in the UK energy generation mix. The Government is committed to increasing the deployment of renewable energy across the UK and recognises the potential role and contribution that solar PV could make in helping to meet the UK's target of 15 per cent renewable energy from final consumption by 2020 (see Box 1).

Box 1: 2020 Renewables Target

The 2009 Renewable Energy Directive set a target for the UK to achieve 15% of its energy consumption from renewable sources by 2020. This compares to 4.1% in 2012. Very good progress has been made, but the scale of the increase over the next seven years represents a huge challenge and will require strong contributions from all three sectors of electricity, heat and transport. The mix of renewable energy generation needed to meet the 2020 target will comprise several technologies able to make a significant contribution to meeting the target. Solar PV is one of the eight key technologies set out in the Renewable Energy Roadmap Update 2012¹.

10. Solar PV can be deployed in a variety of locations and contexts including domestic roofs, commercial and industrial properties, and on the ground in brownfield and greenfield sites. It enables consumers and businesses to independently generate electricity, providing greater competition in the market; increases consumer choice; and given the relative cost and ease of installation in comparison to other renewable energy electricity technologies, makes an attractive option for homeowners, helping them save on their energy bills while contributing towards the delivery of our renewables target.
11. Solar PV is not just important because of its energy generation potential – it can also contribute to UK economic growth. The solar industry in the UK has a thriving installation sector. There is also a manufacturing capacity in the UK, albeit small, particularly in innovative and building integrated solar PV. The rapid growth in the sector means that the long-term jobs and investment potential of the sector is difficult to predict with certainty but sector estimates⁵ indicate that the industry holds the potential for tens of thousands of jobs (including within the dedicated solar PV and wider construction sectors that are focussed on solar PV installation and deployment). DECC will work with the sector and the National Solar Centre (NSC) to develop more-reliable methodologies to measure jobs and investment.
12. The UK is an increasingly important player in the European market for solar PV. In May 2013, the European Photovoltaic Industry Association report indicated that the UK has a 6 per cent share of deployed capacity across Europe (in comparison to Germany with 44 per cent and Italy with 20 per cent)⁶. Although the UK has less sunshine (and

⁵ Renewable Energy Association (2012) Made in Britain <http://www.r-e-a.net/resources/rea-publications>

⁶ EPIA (2013) Global Market Outlook for Photovoltaics 2013 – 2017 Page 20
http://www.epia.org/fileadmin/user_upload/Publications/GMO_2013_-_Final_PDF.pdf

therefore lower load factors⁷) than other countries, our climate - in southern England in particular – is similar to that in Germany⁸, where deployment of solar PV is considerably higher⁹.

Box 2: Solar PV Cost Reduction

The UK has seen a significant level of solar PV deployment together with significant reduction in costs in recent years, with installed costs estimated to have fallen by around 50%². Large-scale solar PV is already comparable with other key renewable energy technologies - cheaper than offshore wind, but more expensive than onshore wind. There is a progressive cost reduction trajectory assumed in the period out to 2016 and 2020, reflecting the advancements made in technology development and supply chains, indicating a reduction in levelised costs of around 20% by 2020.

If this rate of cost reduction continued into the 2020's, solar PV would be competitive in levelised costs terms with other large-scale generation technologies such as combined cycle gas turbines (CCGT) by 2025¹⁰ (see Figure 6 for more information).

13. Solar PV currently accounts for 12 per cent of renewable electricity capacity in the UK and 2.9 per cent of renewable electricity generation¹¹. As of the end of June 2013, 2.4GW installed capacity (with electricity generation during July 2012 to June 2013 of 1.4TWh¹¹) of which 1.7GW is small-scale (mainly domestic) Feed-in Tariffs (FITs) and 0.2GW (mainly) large-scale under the Renewables Obligation (RO)¹². As set out in the UK Renewable Energy Roadmap Update 2012, analysis indicates that there is a potential deployment range of 7-20GW (equivalent to 6-18TWh), with 20GW being the technical maximum level of solar PV deployment by 2020¹.
14. More recently, the publication of the draft Electricity Market Reform (EMR) renewable energy strike prices has shown a modelled expectation for solar PV of 1.8GW – 3.2GW coming forward under the RO and CfD to 2020. In addition to this, central assumptions for small-scale FITs indicate 7.5GW of solar during the same period, giving a modelled total of 9.3GW -10.7GW solar PV deployed out to 2020¹³. This represents a mid-range scenario based on the draft strike prices quoted across the technologies¹⁴. As explained in the Roadmap Update, movement towards the 20GW top limit of deployment (or above 10GW as National Grid have indicated by their modelling¹⁵), without generation being frequently constrained off, is likely to require significant technology cost reduction

⁷ Defined as average load divided by the peak load in a specified time period.

⁸ GIS data indicates⁸ by calculating the annual average between the period 2004 and 2010, in Germany irradiation levels vary from 850kWh/m² in the north west to 1200kWh/m² in the south; whilst in the UK levels vary between 700 kWh/m² in the north to 1200 kWh/m² in the south. SolarGIS © 2013 GeoModel Solar s.r.o. Germany: <http://solargis.info/doc/pics/freemaps/1000px/ghi/SolarGIS-Solar-map-Germany-en.png> UK: <http://solargis.info/doc/pics/freemaps/1000px/ghi/SolarGIS-Solar-map-United-Kingdom-en.png>

⁹ Energiewende (2013) Germany's Recent Solar Energy Record In-Depth <http://theenergycollective.com/thomas-gerke/248721/sunday-solar-sunday-germany-s-july-7-solar-power-record-depth>.

¹⁰ DECC (2013) Electricity Generation Costs 2013, Table 13 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/223940/DECC_Electricity_Generation_Costs_for_publication_-_24_07_13.pdf

¹¹ Energy Trends (September 2013) Tables 6.1 <https://www.gov.uk/government/publications/renewables-section-6-energy-trends>

¹² Energy Trends (September 2013) Table 6.4 <https://www.gov.uk/government/publications/renewables-section-6-energy-trends>

¹³ National Grid (2013) EMR Analytical Report p40

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/223655/emr_consultation_annex_e.pdf

¹⁴ DECC (2013) EMR Consultation on the draft Delivery Plan on p.32.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/238867/Consultation_on_the_draft_Delivery_Plan_amended.pdf

¹⁵ National Grid (2012) Briefing Note for DECC on Solar PV Deployment <https://www.gov.uk/government/publications/solar-pv-electricity-systems-and-the-national-grid-a-briefing-note-for-decc>

together with developments in tools to help balance the supply and demand of electricity including demand-side response utilising smart meters, energy storage, interconnection and flexible generation¹.

15. Solar PV policy is not without its challenges. In particular, solar PV deployment requires careful consideration to ensure appropriate use of land and buildings, and ensures that the views of local communities are heard (see page 24). There are also uncertainties associated with effects of significant deployment, particularly because large volumes of solar PV is embedded generation and can create challenges for grid systems balancing (see page 29). Gaining access and connecting to the network also creates local grid issues (see page 32). Government also needs to ensure that financial incentives are working to encourage deployment and are cost-effective (see page 33).

Solar PV in the UK

16. At present, there are three main markets for solar PV in the UK - domestic, building mounted¹⁶ and ground mounted. In addition to this, there is a small but growing market for building-integrated photovoltaics (BIPV).
17. **Domestic:** Solar PV is a reliable and well established method of generating electricity, suitable for a vast number of homes in the UK. Sunlight is free so once the installation has been paid for, electricity bills can be reduced - protecting the homeowner against the rising costs of electricity while reducing carbon emissions. It enables consumers to independently generate electricity, providing greater competition in the market and increase their level of consumer choice. A typical domestic installation can be as large as approximately 4kW capacity.
18. **Building Mounted:** There are a range of commercial and non-domestic properties in the UK that vary in size and category. These include, but are not limited to, offices, industrial property, hospitals, schools, hotels, retail, farm buildings, and warehouses. Small commercial buildings can typically accommodate PV systems between 4kW and 100kW, while larger commercial buildings allow larger arrays, the largest in the UK currently being 5MW. PV systems for commercial use have similar benefits to those of domestic systems but with the added advantage of generating larger amounts of electricity and generally being able to better match on-site generation with on-site demand.
19. **Ground Mounted:** These differ from building mounted PV systems because they generally supply power at grid distribution level. The land area required for a 1MW fixed tilt array including security fencing is approximately 6 acres (or 2.4Ha; the equivalent size of four football pitches). Output from ground mounted PV can also be optimised in terms of orientation and tilt by using mechanisms to track the Sun.
20. **Building Integrated:** Building Integrated PV (BIPV) refers to photovoltaic systems that generate electricity and function as part of the building. Products such as windows, walls, façades and roofs can be designed as BIPV (e.g. solar shingles/tiles) and architects can use these products to provide both function and style. This emerging

¹⁶ In this context this refers to solar PV installed on commercial and industrial buildings and other building mounted installations at a larger scale than domestic systems (e.g. schools, community buildings).

market, which straddles the building industry and the solar power industry, offers a new way to develop revenue streams for both parties.

21. A framework of policies is in place to drive investment in solar PV in the UK at a wide range of sizes, and in a wide range of locations. Box 3 sets out the financial support framework which solar PV projects can access.

Box 3: Financial support for solar PV

Government's main mechanism to drive the deployment of solar PV is the financial support it provides. Without this support, solar PV would not be able to compete in the electricity market as its costs are currently higher than those of conventional generation. Over time, however, as costs of solar PV come down, this support will be reduced.

Large-scale solar PV generation (in the main above 5MW but also down to 50kW) is currently supported by the **Renewables Obligation** (RO). This places an obligation on UK electricity suppliers to source a specified proportion of the electricity they supply to customers from renewable sources. It is administered by Ofgem who issue Renewables Obligation Certificates (ROCs) to generators for every megawatt hour (MWh) of eligible renewable electricity they generate. ROCs can be sold to a supplier, which allows generators to receive a premium in addition to the price of their electricity. A comprehensive review¹⁷ of the RO support rates was concluded in 2012 and is leading to a reduction in subsidies for the majority of technologies.

The RO will close to new generation on 31 March 2017. From 2014 onwards, the primary financial support mechanism for new large-scale renewable generation will be **Contracts for Difference** (CfDs). A CfD is a long term private law contract that pays the generator the difference between an estimate of the market price for electricity (the 'reference price') and an estimate of the long term price needed to bring forward investment in a given technology (the 'strike price'). The fixed strike price means that investors in low carbon plant are protected from wholesale price volatility and costs to the consumer will be capped. The EMR Delivery Plan consultation¹⁸, published in July 2013, proposed strike prices for large-scale solar PV¹⁹.

The **Feed-in Tariffs** (FITs) scheme was introduced in April 2010 with the intention of encouraging deployment of small-scale (up to 5MW), low-carbon electricity generation. The scheme has been a success with over 450,000 installations (2.2GW capacity) registered by June 2013. Of these, around 99% are solar PV installations. FITs generators receive three financial benefits from the scheme: a generation tariff for all electricity generated by the installation; an export tariff for surplus electricity exported to the local grid; and savings on their electricity bill from generation used on site. The FITs Comprehensive Review²⁰, which concluded in July 2012, sought to improve value for money and reduce tariffs in light of falling costs. It introduced for solar PV a new 'degression' mechanism to enable tariffs to respond more nimbly to market developments by allowing tariffs to reduce in line with deployment.

¹⁷ DECC (2012) Consultation outcome Renewable Obligation Banding Review <https://www.gov.uk/government/consultations/renewables-obligation-banding-review>

¹⁸ DECC (2013) Consultation on the draft Electricity Market Reform Delivery <https://www.gov.uk/government/consultations/consultation-on-the-draft-electricity-market-reform-delivery>

¹⁹ Both Ground mounted and Building mounted

²⁰ DECC (2012) Feed-in Tariff Comprehensive Review Phase 2a <https://www.gov.uk/government/consultations/solar-pv-cost-controls-comprehensive-review-phase-2a>

22. As at the end of December 2012, solar PV represented 1.8 per cent of total generating capacity²¹. There has been 1.4TWh of total generation by solar PV in this year to the end of June 2013, representing 0.4 per cent of the UK’s total generation²², Figure 1 shows the deployment split across the UK, showing that the majority of deployment is based in England²². Figure 2 shows solar PV installed capacity across the different size markets, showing the dominance of domestic installations²¹. Figure 3 shows the most recent data up to end June 2013 of solar PV deployed across the financial incentive schemes, with the small-scale FITs seeing the most up-take²³.

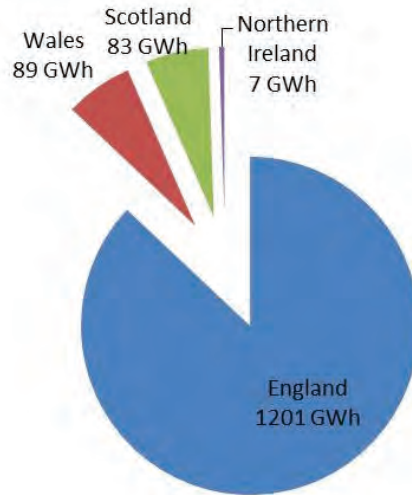


Figure 1 Solar PV generation (GWh) end Dec - end June 2013 across the UK²²

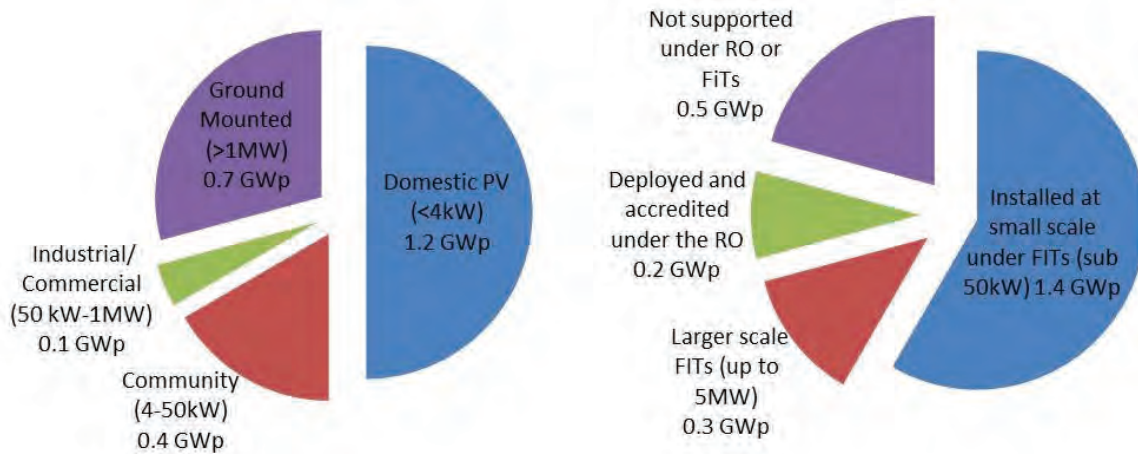


Figure 2 Solar PV installed capacity end Dec – end June 2013 (GWp) across the different size markets²¹

Figure 3 Solar PV installed (GWp) capacity as at end of June 2013 across financial incentive schemes²³

²¹ DUKES (2013) Table 5.13: <https://www.gov.uk/government/publications/electricity-chapter-5-digest-of-united-kingdom-energy-statistics-dukcs>

Ground-mounted (>1MW) includes stand-alone schemes.

²² Energy Trends (2013) Tables 5.1 and 6.1: <https://www.gov.uk/government/publications/electricity-section-5-energy-trends> and <https://www.gov.uk/government/publications/renewables-section-6-energy-trends>

²³ Energy Trends (September 2013) Table ET 6.4 <https://www.gov.uk/government/publications/renewables-section-6-energy-trends>

'Not supported under RO or FITs' includes MCS registered <=50kW; ROOFIT accredited >50kW- 5MW; sites not yet accredited under FIT, RO or ROOFIT from the Renewable Energy Planning Database. Also includes any unaccredited part of capacity at RO sites.

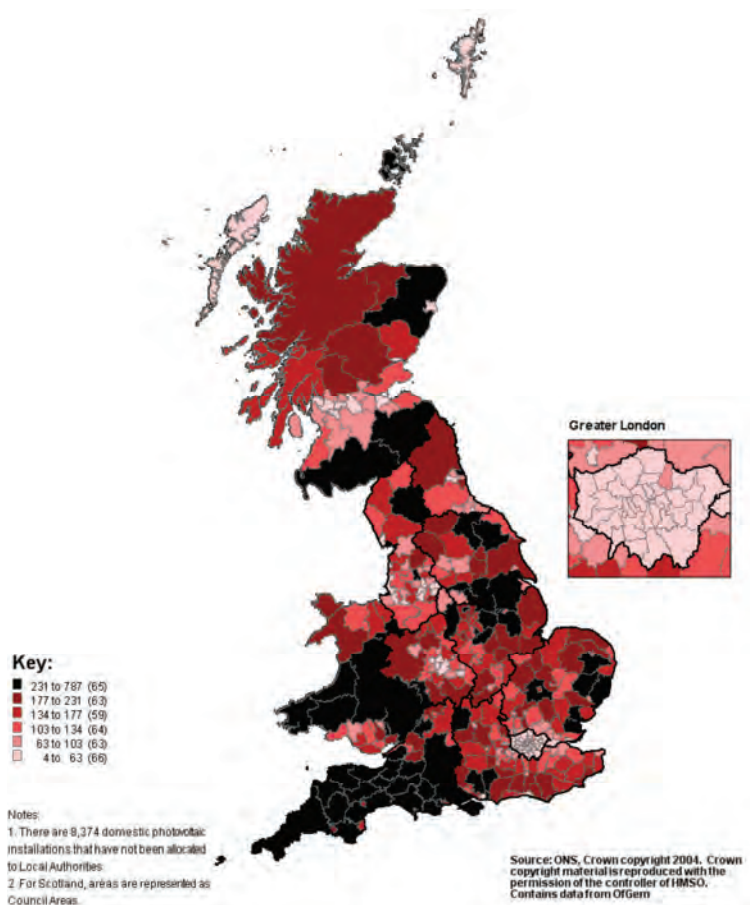


Figure 4: Feed-in Tariffs in the UK – Number of domestic PV installations per 10,000 households by Local Authority, as at end of June 2013

23. Figure 4 shows the distribution of domestic installations in the UK indicating that deployment of solar PV across the UK is highest in south west England²⁴. Estimates of large-scale deployment under the RO indicate approximately 44 per cent are also located in south west England²⁵. This clustering effect can create difficulties in local grid management – this is addressed on page 32. The FIT has also driven rapid growth in Scotland²⁶, Wales²⁷ and Northern Ireland, which has also experienced considerable interest in solar PV at all scales, particularly at domestic level but also increasing interest in the non-domestic sector including farm buildings²⁸.

²⁴ DECC (June 2013) Sub-regional Feed in Tariff statistics <https://www.gov.uk/government/statistical-data-sets/sub-regional-feed-in-tariffs-confirmed-on-the-cfr-statistics>

²⁵ DECC (October 2013) REPD Database <https://restats.decc.gov.uk/app/reporting/decc/monthlyextract>

Currently there are 284 operational solar projects within the UK. 126 of these are in the South West, representing 44.4% of the national total. Of these 126 projects, 123 or 98% of them have an installed capacity $\geq 50\text{kW}$ and 49 or 39% of them have an installed capacity $\geq 5\text{MW}$.

²⁶ 25,850 installations in Scotland. DECC (June 2013) Sub-regional Feed in Tariff statistics. <https://www.gov.uk/government/statistical-data-sets/sub-regional-feed-in-tariffs-confirmed-on-the-cfr-statistics>

²⁷ 28,622 installations in Wales. DECC (June 2013) Sub-regional Feed in Tariff statistics. <https://www.gov.uk/government/statistical-data-sets/sub-regional-feed-in-tariffs-confirmed-on-the-cfr-statistics>

²⁸ Current overall deployment is approximately 6 MW from over 1000 generating stations accredited under the Northern Ireland Renewables Obligation (NIRO). Whilst small in UK terms, this represents a more than 200% increase since late 2011.

Case study 1: Solar PV - Bentley Motors – UK’s Largest Rooftop Array



The Bentley Factory in Crewe built in the 1940s is ideally situated to generate solar power as the “saw tooth” factory roofs are south facing at an angle of 20 degrees. It is the UK’s largest rooftop solar PV array, owned and operated by solar power generator, Lightsource Renewable Energy and installed by main contractor Solarcentury.

Over 20,000 solar PV panels have been installed generating enough electricity adequate to power over 1,200 households covering 3.45 hectares

of roof space which would otherwise be un-utilised. Lightsource Renewable Energy entered into a power purchase agreement with Bentley Motors, making it possible for the electricity generated during working hours to be used directly by the factory and for the electricity generated at weekends and times of low demand, to be fed back into the National Grid. At peak generation times, the system will produce up to 40% of Bentley’s energy requirements.

The installation on Bentley’s factory demonstrates the potential for solar energy to be generated on commercial roof-tops in the UK and is a clear example of how businesses can gain greater pricing certainty for the future whilst reducing their carbon footprint. With the build only taking 16 weeks, it shows the speed at which installations of this size can be completed even when constructed in tandem with existing business activity.

Developing engagement with the solar industry

24. The Government has increased its strategic focus on the solar PV industry as deployment has increased. The Solar PV Strategy Working Group held its inaugural meeting in March 2013, jointly chaired by DECC and the NSC. It includes members from the main trade bodies, manufacturers, financiers, developers, installers, and others. It provides a forum for discussion of Government policy relating to solar PV deployment; and identifies solutions to barriers to the sustainable deployment of solar PV in the UK.
25. Reporting to the main Strategy Group, five Task Forces are proactively addressing issues and barriers. These address: Land Use and Sustainable Deployment; Engagement; Grid and Networks; Innovation; and Bankability and Finance.
26. The findings of this work will be presented as part of the forthcoming full Strategy document. This analysis will enable us to develop a set of actions for the future development of solar PV in the UK that will shape future policy decisions.

Section 2 – A Framework of Principles

27. The time is right for the Government to set out its vision of the strategic direction for solar PV in the UK – making sure that our policies support the appropriate deployment in a sustainable, cost-effective way. We need to provide certainty to investors, solar developers, and the households, communities and businesses affected by solar PV.
28. This section sets out four guiding principles, which form the basis of Government's strategy for solar PV. These principles are:
 - I. **Support for solar PV should allow cost-effective projects to proceed and to make a cost-effective contribution to UK carbon emission objectives in the context of overall energy goals** – ensuring that solar PV has a role alongside other energy generation technologies in delivering carbon reductions, energy security and affordability for consumers.
 - II. **Support for solar PV should deliver genuine carbon reductions that help meet the UK's target of 15 per cent renewable energy from final consumption by 2020** and in supporting the decarbonisation of our economy in the longer term – ensuring that all the carbon impacts of solar PV deployment are fully understood.
 - III. **Support for solar PV should ensure proposals are appropriately sited, give proper weight to environmental considerations such as landscape and visual impact, heritage and local amenity, and provide opportunities for local communities to influence decisions that affect them.**
 - IV. **Support for solar PV should assess and respond to the impacts of deployment on: grid systems balancing; grid connectivity; and financial incentives** – ensuring that we address the challenges of deploying high volumes of solar PV.

Principle 1 – Support for solar PV should allow cost-effective projects to proceed and to make a cost-effective contribution to UK carbon emission objectives in the context of overall energy goals.

Why is this principle important?

29. The key objectives of Government energy policy are to ensure the future security of electricity supplies; to drive the decarbonisation of our electricity generation; and to minimise costs to the consumer. Cost-effective deployment of renewable energy technology, including solar PV, is a central element of our strategy.
30. There are a number of challenges to overcome to ensure that solar PV can fulfil its deployment potential. In particular, cost reduction is central to ensuring we can deploy significantly greater levels of both small-scale and large-scale solar PV, and ensuring costs for bill-payers are minimised.
31. The key drivers to cost reduction include 'learning curve' effects; maximising opportunities in technology innovation; improving construction techniques; and exploiting supply chain competition and the overarching economies of scale.

What do we already know?

32. Driven by advances in technology and economies from an increasing global scale of production, the cost of solar PV has declined steadily over time and quite dramatically. Figure 5 shows DECC-published estimates for costs of domestic (assumed as sub-4kW) solar PV. The comparison of three separate studies of cost estimates²⁹ show that since the beginning of the decade, the costs of solar PV have fallen by over 50 per cent.

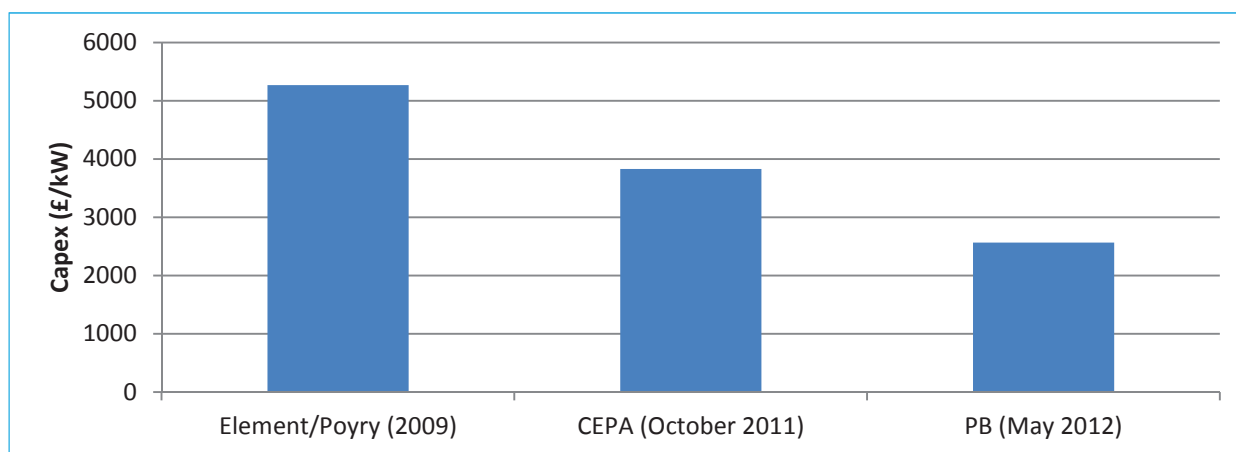


Figure 5: Estimates published by DECC of capex for domestic (<4kW) solar PV installations²⁹

²⁹Provided as part of the FITs Comprehensive Review by Cambridge Economic Policy Associates (CEPA) Cambridge Economic Policy Associates Ltd and Parsons Brinckerhoff (2011) Updates to the Feed-in Tariff Model Documentation of Changes for solar PV Consultation https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48136/2174-cepa-paper.pdf and Parsons Brinckerhoff (PB) (in October 2011²⁹) and by PB (in May 2012) Parsons Brinckerhoff (2012) Solar PV Cost Update https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/43083/5381-solar-pv-cost-update.pdf

33. The costs of different kinds of energy generation are often expressed as ‘levelised costs’ – that is, average cost over the lifetime of the plant per MWh of electricity generated, expressed in £/MWh. Figure 6 compares the levelised costs of both small-scale (typical domestic <4kW installation) and large-scale (>5MW installation) solar PV with other generation technologies (for example, onshore and offshore wind, and gas). The levelised costs presented here are calculated using ‘technology specific’ discount rates³⁰ which reflect the relative financing costs of each technology.
34. Figure 6 shows that large-scale solar PV is already comparable with other key renewable energy technologies - cheaper than offshore wind, but more expensive than onshore wind. There is a progressive cost reduction trajectory assumed in the period out to 2016 and 2020, reflecting the advancements made in technology development and supply chains, indicating a reduction in levelised costs of around 20 per cent by 2020. If this rate of cost reduction continued into the 2020’s, solar PV would be competitive in levelised costs terms with other large-scale generation technologies such as CCGT by 2025³¹.

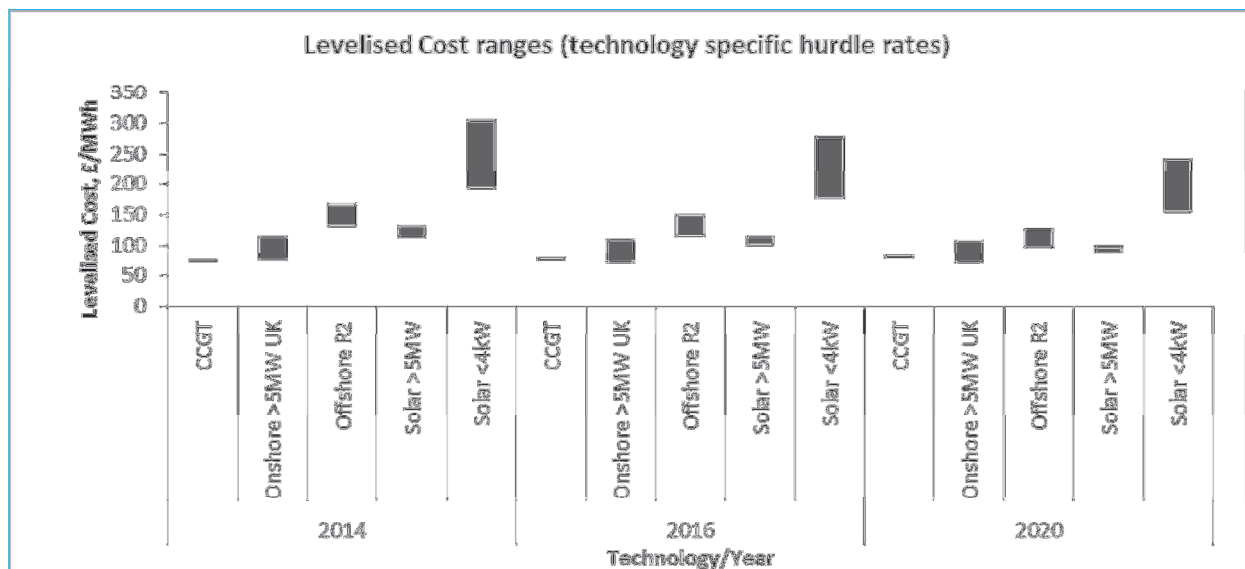


Figure 6: Estimated levelised cost comparison of electricity generation technologies³⁰.

35. However, this does not imply that significant small-scale solar PV deployment will only be possible at high levels of subsidy. Households’ required rates of return are likely to be spread over a wider range than those of typical investors in larger scale projects, reflecting the large variations in investment preferences. Many households looking to invest in small-scale solar PV will therefore target a significantly lower rate of return than assumed in calculating hurdle rates in Figure 6 above. Furthermore, households enjoy the added benefit that solar PV can offset some of the costs of electricity consumption.

³⁰ DECC (2013) Electricity Generation Costs 2013

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/223940/DECC_Electricity_Generation_Costs_for_publication_-_24_07_13.pdf. The hurdle rate for small-scale solar (8% pre-tax, real) is the mid-point of the hurdle rate range for domestic investors assumed in modelling for Phase 2A of the FITs Comprehensive Review Government response (4.5-11.5%). For more details see https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/43080/5391-impact-assessment-government-response-to-consulta.pdf

³¹ Assessment based on Table 13, DECC (2013) Electricity Generation Costs 2013

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/223940/DECC_Electricity_Generation_Costs_for_publication_-_24_07_13.pdf

36. That said, although significant cost reductions have occurred in recent years, the costs of the basic materials are relatively high and the level of cost reduction that is feasible to achieve grid parity is still very uncertain, particularly in areas with modest solar radiation like the UK³². Current cost uncertainty is also as a result of European Commission anti-dumping and anti-subsidy cases (see Box 4 below).

Box 4: European Commission anti-dumping and anti-subsidy

In the short-term, solar PV module prices have been affected by the recent complaint by a group of European manufacturers which has led the EU Trade Commissioner to launch an investigation into whether the Chinese manufacturers have been benefiting from dumping or subsidies (unfair trade practices³³). The European Commission concluded that there has been dumping and proposals have been made for a minimum import price and an import volume cap for Chinese solar products imported to Europe or, for some Chinese companies, for them to undertake to sell into the EU at no lower than an agreed minimum price. However, final decisions are yet to be made on the anti-dumping and anti-subsidy cases. In the context of setting a Strategy for solar PV deployment, the impact of these anti-dumping and anti-subsidy investigations remains uncertain but does affect the sector in the short-term. The UK Government is actively involved with the cases and will continue to work to influence the outcomes and track the impact of decisions made. We expect final decisions on the anti-dumping proposals to be taken in December 2013 and we will take account of these in the Strategy document.

Innovation and Technology Development

37. Innovation is key to improving performance and efficiency of mono- and poly- crystalline and hybrid panels in order to bring down the cost of production¹.
38. Solar PV technologies have developed significantly over time, and different technologies are at different states of maturity. Mature **first generation technologies**, such as crystalline silicon, dominate the market with their low costs and with commercially viable efficiency. They are a relatively mature PV technology with a wide range of well-established manufacturers.
39. **Second generation technologies**, which use thin films to reduce high manufacturing and materials costs, are similarly reaching maturity. Innovation for first and second generation technologies is primarily focussed on installation standardisation and system optimisation.
40. **Next generation photovoltaics** (e.g. excitonic PV cells³⁴) – which are not yet commercial at scale (except for concentrated solar PV) – and **solar PV supply chains** require innovation to reduce costs, increase efficiencies and lifetimes, as well as ensuring they can be effectively integrated into energy systems. Innovation in these

³² IRENA (2012) Renewable Energy Technologies: Cost Analysis Series Solar Photovoltaics, Vol 1 Issue 4/5 http://www.irena.org/DocumentDownloads/Publications/RE_Technologies_Cost_Analysis-SOLAR_PV.pdf

³³ Dumping is the practise of selling at prices in the export market lower than in the exporter's domestic market. Subsidies is the practice of governments or other public bodies providing financial benefits which confer benefits on companies.

³⁴ Excitonic solar cells are a new research area that use polymers, dye molecules or quantum dots to harvest the sun's energy to generate electricity e.g. Organic PV; dye sensitised solar cells; hybrid and tandem solar cells.

areas is key to long-term further cost reduction and realising the deployment potential of solar PV.

41. The UK has well-established research and development activity in place for a range of photovoltaic technologies and applications, which are predominately focussed on academic research of next generation technologies (see Box 5 below).

Box 5: Innovation in the UK

UK Government funding for solar innovation is provided via the Low Carbon Innovation Coordination Group (LCICG)³⁵, which brings together the major public sector-backed organisations that are supporting low carbon innovation, with a view to maximising the impact of UK public sector funding for low carbon technologies. Over the last three years, the UK Research Councils have spent around £10m annually on solar energy research, with current investments by the Engineering and Physical Sciences



Research Council (EPSRC) totalling £48m. Managed solar research activity in the UK is now mostly directed through the new SUPERGEN Supersolar Hub, developed by a consortium of UK universities, which has been designed to consolidate and coordinate existing solar research groups and is focussing its research on new materials and systems performance³⁶. The Technology Strategy Board works to accelerate economic growth by stimulating and supporting business-led innovation. Its strategy is therefore focussed on supporting the growth potential of next generation PV technologies. The TSB has contributed approximately half of the investment for a portfolio of solar-related projects totalling some £26m across areas including materials, manufacturing, electronic sensors and photonics, and supply chain innovation.

42. While crystalline-silicon is the most mature PV technology, there still exists significant potential for reducing manufacturing costs through technology innovation and economies of scale³². According to Mehta and Maycock (2010), both low and high-cost manufacturers could halve their production costs by 2015³⁷.
43. In addition, making cost reductions in balance of systems (BoS) (including mounting materials, racking, inverters, wiring, installation labour, financing and contractual costs, permitting) is essential to see industry deploy at significant scale in the UK. However, the opportunities for BoS cost reduction are more fragmented – due to the myriad of players within the market (developers, installers, suppliers, regulators, utilities and building owners) that need to cope with varying sites, regulatory systems and customer demands, together with a lack of knowledge-sharing that exists across the industry³⁸. Developers need to consider this in their own business plans to create synergies across the sector.

³⁵ DECC Low Carbon Innovation Coordination Group <http://www.lowcarboninnovation.co.uk/>

³⁶ Organic Solar PV Cell module. Photo: Solar Press UK Ltd.

³⁷ Mehta, S. and P. Maycock (2010), The PV Supply Chain: Manufacturing, Technologies, Costs, Greentech Media Research and PV Energy Systems, 11 October

³⁸ Rocky Mountain Institute (2010) Achieving low-cost solar PV: Industry workshop recommendations for Near-term balance of system cost reductions. <http://rmi.org/Content/Files/BOSReport.pdf>

Case study 2: Innovation/Cost Reduction - Naked Energy Hybrid Panel 'Virtu™'

Naked Energy³⁹ is an award winning British design and innovation business, founded in 2010, developing Virtu® – a patented hybrid solar panel that generates both electricity and heat for commercial and residential applications. One Virtu array with 1.5m² of absorber area is able to generate over 1.35kW of combine heat and power. In one year this could offset approximately 340kg of CO₂ - around three times as much as a conventional PV panel with the same power rating (250Wp)⁴⁰.



Virtu is versatile, modular in design and with the combined ease of installation and reduced physical footprint and materials it makes for an attractive proposition. The key innovation is a highly efficient heat transfer mechanism that has been extensively tested and validated by Imperial College London (with approximately 90% of the radiation being captured and converted in to heat and power). On-going environmental tests are being conducted with one of the UK's largest utility companies prior to an integrated pilot with a leading supermarket group.

Naked Energy is currently working with UK manufacturing partners on a design and process for volume manufacture to develop a reliable and cost effective solution for homes and businesses that can form part of a balanced UK energy mix.

UK Manufacturing, Jobs & Investment

44. Maximising the economic benefit to the UK is an important element of our strategy for solar PV. To date, the UK solar PV sector has been largely characterised by downstream activity such as system design and installation. While there is some manufacturing capability in the UK, the larger proportion of economic activity and jobs have come from installation⁴¹.
45. The UK solar PV manufacturing base is relatively small – as the majority of processes take place outside the UK, mostly relying on imports to provide modules to the industry. However, Sharp Solar in Wrexham, north Wales has been manufacturing solar PV since 2004 together with more specialist module manufacturing provided by Romag and GB Sol. In addition, there are numerous supply chain companies who have taken advantage in the rapid growth of PV manufacture including NSG Pilkington, Dupont, SAFC Hitech, IQE and Crystalox.
46. In addition, the UK does have significant, specific strengths in innovation which can contribute to future economic growth. Manufacturing and scale-up of new technologies often takes place at the point of invention, creating local jobs and products capable of profiting from wider global markets. The strong academic and innovation expertise in the UK means that we have the potential to create and provide world-leading

³⁹ Naked Energy (2013) <http://www.nakedenergy.co.uk/>

⁴⁰ Assuming the heat generated displaces gas as a primary source and the array receives an average of 1000 hours of solar irradiation

⁴¹ Renewable Energy Association (2012) Made in Britain <http://www.r-e-a.net/resources/rea-publications>

commercial technology but also to export those skills and knowledge. Next generation PV, excitonic technologies - including both dye-sensitised cells and organic and hybrid PV - are a growing research area in the UK. Research Council (RCUK) activities were recognised as world-leading by the International Review of Energy Research⁴². In addition to primary research, the UK introduced the first assembly line for flexible excitonic cells⁴³. Our research strength promises to be a platform for the UK to build on its lead in this area.

47. The rapid development of the sector has meant that it has been difficult to obtain reliable data on permanent jobs arising from growth of the industry. However, the readjustment of FITs and the RO should allow growth within the sector in the UK to normalise over the next few years, notwithstanding the effects of any anti-dumping tariffs imposed by the European Commission. Over this period a better view of the economic growth and jobs potential of the solar PV sector in the UK to 2020 and beyond will become clearer. Government will continue to monitor the growth of the sector and consider the further policy steps needed in light of this.

What are the next steps?

48. The Innovation Task Force (chaired by Loughborough University), working with EPSRC, anticipates areas for system cost reduction and new technologies. The group includes support from UK Universities and the industry, and will address a range of issues for future development of PV. This further work by the Task Force, DECC and its partners, some of which will be undertaken ahead of publication of the Strategy, will include the following:
- Within first generation technology development, further work is needed by the sector to find business synergies and opportunities to align their design strategies. The sector will need to identify what approach is optimal for the greatest impact. This work will be coordinated by the NSC and the Innovation Task Force.
 - DECC will complete further analysis of the levels of cost reduction required to deliver different levels of solar PV deployment over the next decade, and assess whether these are feasible given evidence on technology learning rates and likely sources of cost reduction in the solar PV sector. This analysis will be done in light of the on-going European Commission anti-dumping case against imported panels and cells.
 - DECC will continue to work, through the Solar PV Strategy Group and in collaboration with the NSC and trade associations to determine reliable methodologies to access data on jobs and investment in the UK solar PV sector. These will be an important indicator on the effectiveness of Government policies on solar PV deployment and the economic benefit which this creates for the UK economy.

⁴² Research Councils UK (2010-2012) Review of Energy <http://www.rcuk.ac.uk/Publications/reports/Pages/Energy2010.aspx>

⁴³ SPECIFIC (2012) <http://www.specific.eu.com/capabilities/pilot>

- In partnership with UKTI, DECC will continue with on-going activity to promote UK expertise in the solar PV sector abroad. A number of trade missions led by Greg Barker, for example, to India and Central Africa and the Middle East have sought to underline the UK's ability to provide design and installation solutions and to promote innovative UK solar PV products. A further trade mission to Saudi Arabia is planned for the autumn.
- DECC will continue to concentrate our efforts through the LCICG and the Research Councils on next generation photovoltaics where the UK leads⁴² and to build on our success, by collaborating with small, medium and large private sector partners. The EPSRC have also co-funded with TSB an innovation centre in Swansea working on "Buildings as Power Stations" where solar panels can be adapted to building materials and structures. This work is led by Swansea University with Tata Steel as the main industrial partner. The TSB is a partner in the Solar Eranet⁴⁴ focussing on UK business opportunities for collaborations across Europe to accelerate technology development and deployment of next generation technologies.
- Innovation and research will also continue to look at module degradation and characterisation during accelerated ageing. This will be of benefit to companies working in the UK as module characterisation over a lifetime is intrinsic to commercialisation. This research is developing into being able to perform international standardisation and accreditation testing which will aid companies working in the UK to comply with international standards. The TSB runs funding programmes for business that are developing new products and processes for next generation photovoltaic technologies and systems, the three main programmes are Smart; Knowledge Transfer Partnerships (KTP) and Innovation Vouchers⁴⁵.

⁴⁴Solar Eranet: www.solar-era.net

⁴⁵Technology Strategy Board Innovation Vouchers. www.innovateuk.org

Principle 2 – Support for solar PV should deliver genuine carbon reductions that help meet the UK’s target of 15 per cent renewable energy from final consumption by 2020.

Why is this principle important?

49. Solar PV and other renewable energy technologies can displace more carbon intensive generation from our electricity supply. However, GHG emissions occur at various stages of the process to convert a raw material or renewable energy source into energy.
50. Consideration of life cycle emissions (LCE) for solar PV, going beyond point-of-use enables us to identify and understand the reasons for hotspots along its life cycle where emissions are significant; where these key emissions are located and how they impact on solar PV deployment in the UK (see Figure 7). This will enable Government to assess how best to support solar PV technology by enabling it to maximise the delivery of genuine carbon reductions to help meet carbon emissions objectives whilst also taking into account the complexity and extent of the supply chains that exist for the solar PV sector.

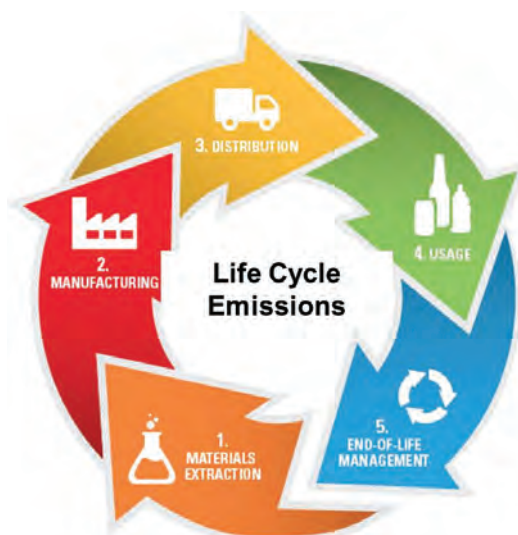


Figure 7 Key phases of Life Cycle Emissions Assessment⁴⁶

What do we already know?

51. The lifecycle of the dominant silicon-based PV consists of several stages, with the raw material extraction and manufacturing phases being the most significant. The raw material extraction for the PV module and silicon cell manufacture is an energy intensive process and balance of system manufacture includes the production of steel, aluminium and other metals⁴⁷. These phases account for 60-80 per cent of the emissions^{48,49}. The life cycle emissions of solar PV have been well researched and

⁴⁶ Image adapted from U.S. Environmental Protection Agency <http://www.epa.gov/climatechange/climate-change-waste/life-cycle-diagram.html>

⁴⁷ The Commission on Climate Change, Ricardo- AEA (2013) Current and Future Lifecycle Emission of key low carbon technologies and alternatives <http://www.theccc.org.uk/wp-content/uploads/2013/09/Ricardo-AEA-lifecycle-emissions-low-carbon-technologies-April-2013.pdf>

⁴⁸ NREL (2012) Life Cycle Greenhouse Gas Emissions from Solar Photovoltaics <http://www.nrel.gov/docs/fy13osti/56487.pdf>

documented and recent studies continue to show a wide variability in results. This is not only due to the type of technology assessed, but is also attributed to several key factors including solar radiation - countries where solar radiation is higher will give lower LCEs; the lifetime - the higher the lifetime the lower the LCE; the performance ratio - the higher the performance and efficiency the lower the LCE; and the type of installation (rooftop building integrated/standalone or ground-mounted) – the type of installation will affect insolation in addition to material requirements for the balance of system.

52. A study giving a detailed analysis of recent studies on lifecycle analysis (LCA) of solar PV⁵⁰ shows a range of 20 – 100gCO₂e/kWh; whilst another study⁵¹ shows a higher variability with 13 – 130gCO₂e/kWh. Despite the wide ranges, there is consensus that the type of panel, the climate conditions where the panels are installed and the local conditions of the type of electricity input during manufacture play a key part in providing differing results. In comparison with other technologies – onshore and offshore wind power have a relatively small carbon footprint range of between 3 – 28gCO₂e/kWh⁵¹. Onshore and offshore turbines show similar emission factors because large emissions during the construction phase can be compensated for by the higher productivity of offshore turbines⁵². The average emissions from fossil fuelled CCGT in the UK was significantly higher with a footprint range of 350 – 410gCO₂/kWh⁵¹.
53. With a significant amount of research completed and other work already underway, it is important to consider the varying methodologies associated with life cycle assessment of emissions; the assumptions and the impact they have on the outputs; particularly with a view to the impact of the location of PV cell and module manufacturing.

What are the next steps?

54. The Innovation Task Force, DECC and its partners will undertake:
- Further work to understand the life cycle emissions that apply to solar PV deployment in the UK; particularly in relation to the current markets from which solar panels are sourced. DECC will undertake a detailed analysis of current findings to help shape solar PV policy in order for it to deliver genuine carbon reductions that help meet UK carbon reduction objectives.

⁴⁹ Alsema, E. A. and de Wild-Scholten, M. J. (2006). Environmental impacts of crystalline silicon photovoltaic module production. Paper presented at the 13th CIRP International Conference on Life Cycle Engineering, Belgium.

⁵⁰ Hsu, D. et al (2012) Life Cycle Greenhouse Gas Emissions of Crystalline Silicon Photovoltaic Electricity Generation Systematic Review and Harmonization, *Journal of Industrial Ecology* Volume 16, Issue Supplement s1, pages S122–S135, April 2012
<http://onlinelibrary.wiley.com/doi/10.1111/j.1530-9290.2011.00439.x/pdf>

⁵¹ Turconi, R et al (2013) Life Cycle Assessment of electricity generation technologies: Overview, Comparability and limitations, *Renewable and Sustainable Energy Reviews* 28: 555 -565.

⁵² Pehnt M. (2006) Dynamic life cycle assessment of renewable energy technologies, *Renewable Energy*, 31:p55-71.

Principle 3 – Support for solar PV should ensure proposals are appropriately sited, give proper weight to environmental considerations such as landscape and visual impact, heritage and local amenity, and provide opportunities for local communities to influence decisions that affect them.

Why is this goal important?

55. Bringing forward appropriately sited solar PV installations is an essential part of a responsible UK energy policy. Recently solar has achieved highest public approval rating of all renewable energy technologies at 85 per cent⁵³. However, Government recognises the importance of ensuring that installations are appropriately sited, and that we exploit the potential of roofs and brownfield sites.
56. The marked increase in deployment of solar PV over the last three years has seen installation at all scales. Permitted development rights for micro-generation have facilitated the deployment of solar PV at smaller scale by removing the need for formal planning permission for many small installations. In addition, there has been a significant increase in large-scale ground-mounted solar PV – 700MW deployed in the period end of Dec 2012 up to June 2013²¹. A proportion of this deployment has been on brownfield/previously developed land (such as the 32MW Wymeswold solar farm, sited on a disused airfield) or connected to existing commercial or industrial facilities such as Thames Water’s installation of 5MW of solar PV at three of their London water treatment plants. In addition, a significant proportion has been sited on greenfield sites where these have met planning policy requirements.
57. The key issue is ensuring that proposals to deploy solar PV take account of the circumstances of each project. A brownfield site may contain a Site of Special Scientific Interest or be part of an Area of Outstanding National Beauty. Likewise, even plots of the highest grade agricultural land could include areas which are in themselves lower grade and could legitimately be used for solar PV deployment. There is increasing evidence that, if well planned and managed, there can be biodiversity benefits arising from the deployment of solar PV at large scale. Furthermore, a number of developers and environmental organisations are already developing biodiversity plans in conjunction with solar PV deployments⁵⁴.
58. DECC is working with other key Departments, including the Cabinet Office⁵⁵ and the Ministry of Defence (MoD) to promote installation of solar PV on under-utilised brownfield land and roof space in the Government and Defence Estate. The UK’s planning regimes include robust safeguards to ensure that developments, including solar PV installations, are properly sited and that individuals, communities and the landscape itself are protected against any unacceptable impacts. This means that

⁵³ DECC (2013) Public Attitudes Tracker Wave 5

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/198722/Summary_of_Wave_5_findings_of_Public_Attitudes_Tracker.pdf

⁵⁴ German Renewable Energies Agency (2010) Solar Parks – Opportunities for Biodiversity, A report on biodiversity in and around ground-mounted photovoltaic plants. <http://www.solar-trade.org.uk/media/Biodiversity-in-Solarparks.pdf>; Natural England (2011) Technical Information Note TIN101, Solar Parks: maximising the environmental benefits <http://publications.naturalengland.org.uk/publication/32027>; Parker, G; McQueen C (2013).

Can solar parks provide significant benefits for biodiversity? Preliminary Study <http://www.solar-trade.org.uk/media/Can%20solar%20parks%20provide%20significant%20benefits%20for%20biodiversity%20%20.pdf>

⁵⁵ Which covers Government Procurement Service & Government Property Unit.

issues such as visual amenity, land use and other environmental impacts are an important consideration within the planning process. The planning systems in the UK⁵⁶ also provide many opportunities for local people to participate in key decisions affecting their areas. The Coalition Agreement included a commitment to supporting community energy projects, which can play an important part in raising awareness about low carbon energy and in giving communities control over their own energy supply.

What do we already know?

59. In July 2013 the Department for Communities and Local Government, in association with DECC, published revised planning guidance for renewable energy developments. This provides guidance on the implementation of the planning policy for England set out in the new National Planning Policy Framework which was published in March 2012.
60. The revised guidance on renewables provided planners with more specific guidance on the issues that they should consider in relation to large-scale solar PV planning applications. The revised guidance makes clear that the need for renewable energy does not automatically override the need for planners to properly scrutinise the effects of renewables deployment. It underlines the need for planners to ensure that the impacts of proposed renewable energy deployments are acceptable, including impact on visual amenity and effects on cultural and heritage landscapes.
61. In addition to this formal guidance, the industry is increasingly taking action to provide guidance to developers on planning and to develop and promote best practice. Earlier in the year, the NSC, a subsidiary of the Building Research Establishment, published guidance for planners and developers on large-scale solar PV⁵⁷. It draws on the experience of Cornwall Council in considering sites for suitability for solar PV deployment. In August 2013, the Solar Trade Association published its '10 commitments'⁵⁸ for solar developers to promote best practice, including, avoiding the use of high grade agricultural land; activity engaging communities; minimising visual impacts and returning land to previous use.
62. In Scotland, online planning guidance in respect of solar PV can be found on the Scottish Government website⁵⁹: Northern Ireland has a devolved planning regime and 'Planning Policy Statement 18: Renewable Energy'⁶⁰, aims to facilitate the siting of renewable energy generating facilities in appropriate locations within the built and natural environments. Permitted development rights have been introduced for the installation of solar panels up to 50kW on domestic properties, schools, businesses and farm buildings.
63. Recently there has been increasing coverage in the media on large-scale ground-mounted installations that have been developed; and particularly those on higher grades of agricultural land⁶¹. The Government is keen to see renewable energy

⁵⁶ Separate planning systems operate in Scotland, Northern Ireland, England and Wales.

⁵⁷ Building Research Establishment (2013) National Solar Centre <http://www.bre.co.uk/page.jsp?id=2983>

⁵⁸ Solar Trade Association (2013) Solar Farms 10 Commitments <http://www.solar-trade.org.uk/media/STA%2010%20commitments%20v%2010.pdf>

⁵⁹ Scottish Government, Large Photovoltaic Arrays <http://www.scotland.gov.uk/Resource/Doc/212607/0113235.pdf>

⁶⁰ Department of the Environment Northern Ireland (2009) Planning Policy Statement 18: Renewable Energy http://www.planningni.gov.uk/index/policy/policy_publications/planning_statements/planning_policy_statement_18_renewable_energy-2.htm

⁶¹ Ministry of Agriculture, Fisheries and Food (1998) Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land.

installations that are developed sustainably. The National Planning Policy Framework states that:

“The Planning policies and decisions should encourage the effective use of land by re-using land that has been previously developed (brownfield land), provided that it is not of high environmental value. Local planning authorities may continue to consider the case for setting a locally appropriate target for the use of brownfield land. Local planning authorities should take into account the economic and other benefits of the best and most versatile agricultural land. Where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality land in preference to that of a higher quality.”⁶²

64. The guidance further states that:

“Particular factors a local planning authority will need to consider include:

- *encouraging the effective use of previously developed land, and if a proposal does involve greenfield land, that it allows for continued agricultural use and/or encourages biodiversity improvements around arrays;*
- *that solar farms are normally temporary structures and planning conditions can be used to ensure that the installations are removed when no longer in use and the land is restored to its previous use...⁶³*

What are the next steps?

65. In meeting the Coalition commitment to support community energy projects, in June 2013, the Government launched the Call for Evidence on Community Energy, ahead of a Community Energy Strategy to be published in the autumn 2013. It will identify the potential of community energy projects in the UK to bring benefits to communities while helping to tackle climate change and maintain energy security. It will consider how to help community energy projects overcome the main barriers they face. It will include all types of ‘community energy’ projects – not just renewable electricity projects, but also projects focused on generating heat; energy-saving initiatives; collective purchasing and switching schemes (where communities club together to get a better deal on their energy); smart grids (using improved grid technologies to help communities save money by using energy at times of lower demand); and any combination of these. Community energy could range from a small church group talking about energy or helping out with leafleting, all the way through to joint ownership of a wind farm with a commercial development.

<http://archive.defra.gov.uk/foodfarm/landmanage/land-use/documents/alc-guidelines-1988.pdf>

⁶² Department for Communities and Local Government (2012) National Planning Policy Framework, Paras 111-112.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf

⁶³ Department for Communities and Local Government (2013) Planning practice guidance for renewable and low carbon energy, Para 27 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/225689/Planning_Practice_Guidance_for_Renewable_and_Low_Carbon_Energy.pdf

66. The Land Use and Sustainable Deployment Task Force, chaired by the National Farmers Union, is identifying how we can work within the planning policies, incentives and guidance, to give a mechanism to allow development of large and medium- scale arrays that will be acceptable to developers, environmental groups, local communities and planners alike. Further work will be undertaken by the Task Force, DECC and its partners, some of which will be undertaken ahead of publication of the Strategy. They will:
- Develop a code of best practise for use by large-scale developers, planners, environmental groups; and communities, encapsulating the best principles of all;
 - Develop principles for the development of community schemes; and
 - DECC will consider the distribution of potentially suitable deployment sites across domestic, commercial and industrial roofs and large-scale ground mounted sites.
67. The Engagement Task Force, chaired by the Solar Trade Association, will improve access to deployment opportunities by engaging with a range of sectors, including determining means of improving deployment in the business and industrial sectors. For example: to open opportunities on Government Estate; ideas on improving use of business rooftops; working with Chartered Surveyors and estate agents to improve understanding of how PV provides added value to homeowners. In particular it will:
- Actively engage with MoD and the Cabinet Office to allow access to the MoD estate for development of solar PV; and
 - Work with the Bankability and Finance Task Force, chaired by the British Photovoltaics Association (BPVA), to identify legislative issues and to develop legal and financial frameworks to allow improved financing of building mounted schemes.

Case study 3: National Trust, Wales

The National Trust has recently installed six 50kW PV arrays near its mansions across Wales. These systems have been installed near some of the most designated park lands and buildings in the country. As part of its 2020 energy goal, the National Trust intends to reduce its use of fossil fuels for heat and electricity by 50% by 2020 – including ‘growing its own energy’⁶⁴.

The location of these systems has necessitated the development of impact assessment tools and mitigation planning. These assess their impact on a site’s ‘statement of significance’ – a National Trust methodology for capturing what is special about a site. The National Trust ensured that the selected sites did not impact on areas outside the estate e.g. they were sited behind hedges, trees or other natural features.



⁶⁴ National Trust (2010) Energy: Grow your own <http://www.nationaltrust.org.uk/document-1355764773127/>

With informed and careful planning and appropriate detailing, solar PV can be considered as appropriate in sensitive landscapes and on designated buildings.

For example, at the ancient Powis Castle near the town of Welshpool, the 50kW PV field array is located behind the hedge of the main approach drive to this 100,000 visitors per annum site. The resulting 45MWh of electricity annually is powering a 27kW ground source heat pump for the Victorian greenhouses of the commercial plant nursery and is also supplying the energy for the main garden tea room. When the sun is shining and the visitors are at National Trust properties, the solar PV is also generating, which makes for a good match for both a conservation organisation and tourism operator.

Principle 4 – Support for solar PV should assess and respond to the impacts of deployment: on grid systems balancing; grid connectivity; and financial incentives.

Why is this principle important?

68. With significant increases in solar PV deployment, it is necessary to ensure that wider impacts of solar PV deployment are assessed and monitored with regard to:
- Managing integration into the electricity system and market;
 - Ensuring timely and affordable grid access; and
 - Ensuring value for money through financial incentives.

Managing integration into the electricity system and market

69. With significant levels of solar PV deployment in the UK there are increasing challenges in maintaining a secure and cost effective balance of the UK electricity system. Small-scale installations such as domestic roof mounted systems are not visible generators to network operators; they act as a demand reduction over the network⁶⁵. The network operators do not have control of these installations. At local levels, significant export of electricity can also lead to voltage rises which need to be controlled to ensure stable operation of the system.
70. The whole electricity system has certain operational requirements for stable and secure operation, which depend on the generation mix at the time, network variables and the demand for electricity. As such, there is an interaction between solar PV and wind generation technologies connected to the system and ‘must-run’ plant (e.g. less flexible generation such as nuclear; minimum operational requirements from coal or gas) in varying degrees, depending on deployed levels.
71. These system requirements around plant that ‘must run’ mean that one of the more challenging times for managing the system is when demand levels are at their lowest – known as system minima.
72. With increasing PV deployment, it is likely that the larger proportion would be small-scale installations. In this scenario, the minimum energy demand to be met in the summer, due to PV generation effectively reducing demand seen across the electricity system as a whole (and at times when overall energy demand is also lowest, for example summer Sundays and bank holidays), would reach a threshold where excess generation by solar PV would start to create significant operational and cost implications.

⁶⁵ Larger installations are also likely to be connected to distribution networks - although some could at a very large scale potentially be connected to transmission networks (subject to distribution and grid code requirements).

What do we already know?

73. National Grid published their Solar Briefing Note⁶⁶ in December 2012 in which they indicated that above 10GW of solar PV deployment would make managing the grid significantly more challenging. Since that analysis was completed, National Grid has continued to work with DECC to consider this issue. Having undertaken further analysis of the level of minimum demand, National Grid has updated their paper with an additional note⁶⁷ which confirms that 10GW of solar PV in Great Britain can be accommodated without significantly changing operational practices; but that above this level will make managing the grid significantly more challenging.
74. This note indicates that there are requirements as to the way in which the electricity system is operated, particularly in relation to less flexible generation such as nuclear and combined heat and power needed for heat, and plant which is providing technical services to the system operator. These requirements around plant that ‘must run’ mean that at times when demand levels are at their lowest, additional solar PV generation that cannot be controlled, raises challenges to reducing total generation output down to the required level.
75. However, system minima is dependent on the level of electricity demand. If we electrify heat and transport, the electricity demand would increase, and then the 10GW threshold could relax. Conversely, if electricity demand continues to fall the 10GW threshold is likely to be lower.

What are the next steps?

76. The Grid and Networks Task Force, chaired by National Grid, is working with the Electricity Network Association, Distribution Network Operators (DNO), technology experts and developers, to help develop improved access and integration into the electricity transmission and distribution networks. Continued work by the Task Force, DECC and its partners that will be undertaken ahead of publication of the Strategy will include:
- Work to explore measures and technological advances to manage grid systems balancing with increasing levels of solar PV.
 - Continued work to develop mitigation technologies to help balance the supply and demand of electricity. This includes the following policies and programmes:
 - DECC’s Smart Metering Programme⁶⁸ which aims to replace over 53 million standard gas and electricity meters with smart meters between now and 2020.
 - Ofgem’s Low Carbon Network Fund to trial new technologies and innovative approaches by distribution network operators in Great Britain⁶⁹ (see Case Study 4).

⁶⁶ National Grid (2012) Solar PV Briefing Note for DECC

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/66198/National_Grid_-_solar_PV_briefing_note.pdf

⁶⁷ National Grid (2013) Solar PV Assessing the Impact of Minimum Demand

<http://www.nationalgrid.com/corporate/About+Us/futureofenergy/>

⁶⁸ DECC (2013) Helping households cut their energy bills <https://www.gov.uk/government/policies/helping-households-to-cut-their-energy-bills/supporting-pages/smart-meters>

- DECC's Energy Storage Technology Demonstration Competition⁷⁰.
- EPSRC Grand Challenge Funding in energy storage and networks⁷¹ and the Energy Technology Institute (ETI) Energy Storage and Distribution Programme⁷².
- Ofgem is reviewing the existing GB electricity network system planning and delivery arrangements, including for interconnection, through its Integrated Transmission Planning and Regulation (ITPR) project⁷³; and Government is developing its own evidence base on the impacts of further interconnection and we envisage publishing a policy statement around the end of 2013⁷⁴.

Case study 4: Low Carbon London Smart Metering Trials

Low Carbon London⁷⁵ is a pioneering learning programme, set up in January 2011 and led by UK Power Networks. It aims to use London as a test-bed to develop a smarter electricity network that can manage the demands of a low carbon economy, including intermittent generation such as solar and wind power. The project will conclude in December 2014 and is funded using £20.6 million from the Low-Carbon Network fund and £6.6 million from UK Power Networks and key project partners.

UK Power Networks, and Low Carbon London partner EDF Energy, have installed nearly 6000 smart meters in domestic consumers' homes throughout the London area during 2011/12. These smart meters are being used to monitor changing consumer demand patterns and the subsequent effect on London's electricity network. Those with smart meters were then offered a unique electricity tariff to test whether consumption patterns could be changed by reducing the tariff price when more electricity is expected to be generated through low marginal cost renewable sources and increasing it when renewable output is expected to be low or at times of temporary network constraint.

The tariff has been designed such that most anticipated high and low wind output scenarios will be tested during the course of 2013. Whilst designed as a wind-following tariff, the methodology could in future be replicated with some adaptation to address anticipated day-on-day variations in solar PV output. The trials are on-going. The learning from these trials will have wide UK applications. UK power networks, working with Imperial College London, plan to publish a full set of reports after the trials conclude in June 2014.



⁶⁹ Ofgem (2013) Low Carbon Networks Fund <http://www.ofgem.gov.uk/Networks/ElecDist/lcnf/Pages/lcnf.aspx>

⁷⁰ DECC (2013) Closed Schemes (Still Current) Energy Storage Technology Demonstration Competition <https://www.gov.uk/innovation-funding-for-low-carbon-technologies-opportunities-for-bidders#closed-schemes-still-current>

⁷¹ EPSRC (2011) Energy Storage Grand Challenge <http://www.epsrc.ac.uk/funding/calls/2011/Pages/energystoragegrandchallenge.aspx>

⁷² ETI Energy Storage & Distribution Programme http://www.eti.co.uk/technology_programmes/energy_storage_and_distribution

⁷³ Ofgem (2013) Integrated Transmission Planning and Regulation (ITPR) Project: Emerging Thinking <https://www.ofgem.gov.uk/ofgem-publications/52728/itpremergingthinkingconsultation.pdf>

⁷⁴ DECC (2012) Electricity System Assessment of Future Challenges

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48549/6098-electricity-system-assessment-future-chall.pdf

⁷⁵ <http://lowcarbonlondon.ukpowernetworks.co.uk/>

Ensure timely and affordable grid access

77. In the short term, timely and affordable grid access arrangements are vital to delivering new solar PV generation projects to help meet our low carbon emissions and renewable energy targets. The tasks required to get a solar PV system connected to the grid vary with the size of generating plant but generally, the larger the plant the more complex the connection requirements. Small-scale solar PV is not currently experiencing the same difficulties as some larger-scaled installations.
78. Under the Electricity Act, DNOs are obliged to offer a connection to any customer that wishes to connect to the network (which vary in applicability and detail across the Devolved Administrations). As a result, DNOs are overwhelmed by the volume of enquiries they receive and the number of enquiries that result in new connections is low (estimated between 10 per cent and 15 per cent). According to the Energy Network Association and developers, there are two main reasons for this: a lack of publicly available information for developers and installers to assess spare network capacity in a particular region, and the absence of fees in submitting connection applications.

What has already been done?

79. Ofgem has established the Distributed Generation (DG) Forum to identify and overcome barriers to the connection of distributed generation to the grid, and also introduced incentive mechanisms to improve DNO performance⁷⁶. Recognising that more can be done to provide quicker connections, in March 2013 Ofgem published its Strategy to strengthen these incentives⁷⁷, including financial penalties for failing to demonstrate good customer service to DG and large connection customers. In addition, following the establishment of the DG Forum, the DNOs developed action plans on how they would work to improve their engagement with customers and these are an element of their business plans⁷⁸. The Smart Grid Forum is looking at how smart grid technologies and associated commercial arrangements can improve the connection of distributed generation, including solar PV (see Case Study 4 for further detail).
80. The RIIO-T1 transmission price control⁷⁹ for 2013-21 began on 1st April 2013 in order to consider the costs associated with network requirements to accommodate larger volumes of renewables. Under this, Ofgem has agreed funding of up to £21.5bn for the Transmission Owners to expand, replace and maintain the GB transmission network. In areas where there is limited network capacity, the DNO may have to undertake reinforcement works at a cost to enable a new connection and to accommodate a customer's requirements. In order to address the issue of undertaking advance grid reinforcement works, where there is a wider need, Ofgem's RIIO-ED1 Price Control Review will allow DNOs to undertake speculative investment ahead of need and will be incentivised to use 'smart solutions', which can avoid or defer the need for reinforcement and therefore provide more timely and value for money connections.

⁷⁶ Ofgem The Broad Measure of Customer Satisfaction (BMCS) <https://www.ofgem.gov.uk/electricity/distribution-networks/network-price-controls/customer-service> and the connections Guaranteed Standards of Performance (GSOPs) <http://www.ofgem.gov.uk/Networks/ElecDist/QualofServ/GuarStandds/Pages/GuarStandds.aspx.pdf>.

⁷⁷ In particular, they will introduce a Time to Connect incentive for small customers and an Incentive on Connections Engagement (ICE) for major demand, unmetered and all DG customers. <http://www.ofgem.gov.uk/Networks/ElecDist/PriceCtrls/riio-ed1/consultations/Documents1/RIIOED1DecOverview.pdf>

⁷⁸ Ofgem, Distributed Generation <http://www.ofgem.gov.uk/Networks/ElecDist/Policy/DistGen/Pages/DistributedGeneration.aspx>

⁷⁹ Ofgem, RIIO-T1 Price Control <https://www.ofgem.gov.uk/network-regulation-%E2%80%93-riio-model/riio-t1-price-control>

81. While there are a number of similarities to the GB grid, the position in Northern Ireland is slightly different. The Northern Ireland Authority for Utility Regulation (NIAUR) regulates the single DNO, Northern Ireland Electricity (NIE). A grid connection offer can only be considered once the generator has received planning permission, where appropriate. Parts of the Northern Ireland grid network are nearing capacity due to the increasing amounts of small-scale generation connecting, particularly onshore wind. This is leading to increasing connection costs and timescales and work is underway by NIE to consider how more information on grid 'hot spots' can be made accessible to generators at an early stage and prior to submitting costly planning applications. In addition to this, NIAUR has set up the 'Renewables Industry Group' to tackle the issue, including the consideration of connection to the 11kV network for small-scale renewable generators.

What are the next steps?

82. The Grid and Networks Task Force, DECC and its partners will continue to undertake work, some of which will be undertaken ahead of publication of the Strategy, and will include the following:
- DNOs will provide network hotspot maps to show where connections can be made more quickly;
 - Continued work on RIIO ED1 (DNOs have now submitted their business plans for RIIO ED1. In recognition of difficulties identified by people trying to connect to the distribution network, Ofgem has introduced two new incentives to improve DNO performance in this area. For smaller connections, a time to connect incentive has been introduced to help shorten the connection time for these customers. Following consultations, it was agreed that larger developers felt that flexibility of DNOs was more important than shortening connection times so an Incentive on Customer Engagement is being introduced which will set minimum terms of engagement which DNOs will have to fulfil or receive penalties. Ofgem is currently consulting appropriate targets for these incentives and how these incentives/penalties should be split⁸⁰. This consultation closes on 30 October, and a further response will be subsequently issued in early 2014.); and
 - The NSC will look at legal means and potential for developers to share network upgrade costs to enable deployment.

⁸⁰ Ofgem (2013) Consultation RIIO-ED1 customer service and connection incentives <https://www.ofgem.gov.uk/ofgem-publications/83052/riioed1custserviceconnectionincentivesopenletter040913.pdf>

Enabling Financial Predictability

83. The predictability of financial mechanisms that exist for the sector is critical to providing the industry with confidence to continue to invest. At the moment, incentives are necessary as solar PV is yet to become competitive with other energy sources in the UK. The Government has put in place a range of incentives and support mechanisms to support solar PV (which vary in applicability and detail across the Devolved Administrations). There are three main mechanisms that enable greater financial predictability: Feed-in Tariffs (up to 5MW⁸¹); Renewables Obligation Certificates (until April 2017 for >50kW); and the enduring regime of Contracts for Difference (available from 2014, for projects >5MW). In Northern Ireland, both small and large-scale technologies are currently incentivised through the Northern Ireland Renewables Obligation (NIRO).

What has already been done?

Feed-in Tariffs Scheme (FITs)

84. In the last year, the Feed-in Tariff (FITs) scheme for small-scale renewables has been reformed, through the FITs Comprehensive Review, which was concluded in December 2012. The Review sought to improve value for money and reduce tariffs in light of falling solar PV costs. Taken as a whole, the changes resulting from the Comprehensive Review will place the FITs Scheme on a sustainable footing; providing the transparency, longevity and confidence needed within the industry. The particular mechanism to control costs and provide greater certainty over future tariff rates to potential solar PV generators and investors is quarterly degression, which was introduced on 1 August 2012 (for a more detailed explanation of how quarterly degression will work see the Government Response to Phase 2A of the Comprehensive FITs Review⁸²).

Renewables Obligation Certificates (ROCs)

85. The banding of Renewables Obligation Certificates has seen significant changes take place this year, including for solar PV >50kW. The solar PV consultation on the levels of banded support under the Renewables Obligation (RO) for the period 1 April 2013 to 31 March 2017 closed on 19 October 2012 and the Government response was published on 18 December 2012. This set out the decision to establish two separate bands for solar PV under the RO: one band for building-mounted solar PV; the other band for all other types of solar PV. These bands came into force on 1 April 2013 and are set out in Ofgem's guidance⁸³.
86. Similar RO banding changes were introduced in Scotland at the same time following a separate public consultation. In Northern Ireland, similar ROC bands and levels for solar PV above 250kW came into operation on 1 May 2013. However, in light of subsequent evidence brought forward by the industry, Northern Ireland is consulting on slightly different ROC levels for ground mounted stations above 250kW for the period 2014/5

⁸¹ The Government is proposing to take powers, via an amendment to the Energy Bill, To enable the maximum capacity for support under the FITs scheme to be increased from 5MW to 10MW, for community energy projects only.

⁸² DECC (2012) Feed-in Tariff Comprehensive Review Phase 2a <https://www.gov.uk/government/consultations/solar-pv-cost-controls-comprehensive-review-phase-2a>

⁸³ Ofgem (2013) Renewables Obligation: Guidance for Generators

<http://www.ofgem.gov.uk/Sustainability/Environment/RenewablObl/Documents1/RO%20guidance%20for%20generators.pdf>

to 2016/17⁸⁴. The Department for Enterprise, Trade and Industry is also undertaking a review of small-scale support under the NIRO⁸⁵, including solar PV, with a view to introducing any revised ROC levels in April 2015.

Contracts for Difference (CfDs)

87. To bring forward the billions of pounds of investment needed in new, low-carbon electricity generation and associated network infrastructure, the Government has published key information on CfDs⁸⁶ and consulted on draft strike prices for renewable technologies in the draft EMR Delivery Plan⁸⁷. They will enable a technology mix that is value for money for consumers, along with the upper limits on annual spending on low-carbon generation (including CfDs, the RO and the small-scale FITs scheme) as agreed in the Levy Control Framework⁸⁸.
88. The draft strike price for solar PV was set out in the consultation on the draft Delivery Plan⁸⁷. The draft strike prices have been informed by analysis from National Grid, who assessed the impact of different strike prices on the Government's objectives. At the time of publishing this Roadmap, DECC is analysing the responses to this consultation which will inform the final strike prices published in the Delivery Plan in December. The strike prices for key technologies come down over time showing that as technology costs come down, consumers will be paying less. These strike prices are set to be consistent with the RO levels of support⁸⁹ (though adjusted down as the CfD protects the investor against additional risks), allowing continuity and continued investment in the renewable energy industry.

What are the next steps?

89. The Finance and Bankability Task Force is working with financial and legal experts, as well as developers, to increase understanding of the solar PV sector among financiers and investors and identify means of improving access to finance. Continued work by the Task Force, DECC and its partners will be undertaken ahead of publication of the Strategy and will include the following:
- Producing a quick guide to solar PV financing for developers and installers;
 - Identifying ways of reducing the risk for building owners of roof mounted PV, including working with the insurance industry;
 - Working with the Engagement Task Force to develop legal and financial frameworks to allow improved financing of building mounted schemes;
 - DECC will continue to operate the FITs degression mechanism during the current budgetary period;

⁸⁴ DETI NI (2013) Consultation Proposed Changes to the Northern Ireland Renewables Obligation – Ground-mounted solar PV above 250kW <http://www.detini.gov.uk/here>

⁸⁵ DETI NI (2013) Energy Website for forthcoming information www.energy.detini.gov.uk

⁸⁶ DECC (2013) Electricity Market Reform <https://www.gov.uk/government/policies/maintaining-uk-energy-security--2/supporting-pages/electricity-market-reform>

⁸⁷ DECC (2013) Consultation on the draft Electricity Market Reform Delivery <https://www.gov.uk/government/consultations/consultation-on-the-draft-electricity-market-reform-delivery>

⁸⁸ The mechanisms and headroom arrangements underpinning the Levy Control Framework remain unchanged.

⁸⁹ The existing support scheme for large-scale renewable generation.

- DECC will address the increasing need for a Feed-in Tariff for large-scale community projects. The Government is taking powers, via an amendment to the Energy Bill, to enable it to increase the maximum capacity for FITs support from 5MW to 10MW;
- DECC will continue to monitor deployment, through the ROO-FIT⁹⁰ and MCS⁹¹ databases for schemes subsidised by the FIT, and through the RO database for registered schemes subsidised by the RO. It is essential that DECC continues to review the quality of the data it receives and use. We will aim to improve data collection as far as possible. We will use the REPD database⁹² to improve our understanding of the pipeline for large-scale solar projects (>1MW), which will be augmented by sector intelligence. The NSC will provide a source of subject area expertise, but its formal role, if any, is yet to be defined;
- DECC will continue to put in place clear policy regarding RO Transition to ensure a smooth and straightforward transition from the RO to CfDs as the main financial support mechanism for large renewable generation. DECC is offering a transition period between the introduction of CfDs in 2014, and the closure of the RO to new entrants on 31 March 2017. During that transition period, new renewable generation will be able to choose between the two schemes. DECC's detailed proposals for the transition period and closure arrangements for the RO in England and Wales are set out in the RO Transition Consultation published on 17 July 2013.⁹³ That consultation closed on 25 September, and DECC is currently assessing responses, in order to inform the implementation of the final policy and process via a RO (Amendment) Order 2014 to come into force on 1 April 2014;
- Scottish Government will continue with their equivalent transition arrangements for the RO(S). The Scottish Government's consultation on equivalent transition arrangements for the RO(S) was published on 2 September 2013, and will close on 2 November 2013.⁹⁴ (Because of reforms to the Single Electricity Market in Northern Ireland, the Northern Ireland Executive does not plan to open its market to CfDs until 2016 at the earliest). The Northern Ireland Executive expects to implement similar transition arrangements to those for England, Wales and Scotland, for the period between the introduction of CfDs in NI, and the close of the NIRO on 31 March 2017; and
- The draft EMR Delivery Plan consultation closed on 25 September 2013. We expect to publish final strike prices in December 2013 (subject to State Aid and Royal Assent of the Energy Bill). The EMR programme remains on track for implementation with the first CfDs under the generic regime expected to be signed in the second half of 2014, and the first capacity auction anticipated around the end of 2014. Full details are available of the EMR package⁹⁵.

⁹⁰ ROO-FIT (Ofgem): <https://www.ofgem.gov.uk/environmental-programmes/feed-tariff-fit-scheme/applying-feed-tariff/roo-fit>

⁹¹ Microgeneration Certification Scheme (MCS): <http://www.microgenerationcertification.org/>

⁹² REPD database: <https://restats.decc.gov.uk/cms/planning-database/>

⁹³ DECC (2013) Consultation on Transition from the Renewables Obligation to Contracts for Difference <https://www.gov.uk/government/consultations/transition-from-the-renewables-obligation-to-contracts-for-difference>

⁹⁴ Scottish Government (2013) Consultation on Transition from the Renewables Obligation to Contracts for Difference <http://www.scotland.gov.uk/Topics/Business-Industry/Energy/Obligation-12-13/ConsultationTransitionRO>

⁹⁵ DECC (2013) Electricity Market Reform <https://www.gov.uk/government/policies/maintaining-uk-energy-security--2/supporting-pages/electricity-market-reform>

Section 3 – Setting Future Policy Direction

90. This Roadmap document forms the first element of a two part Strategy process. The second part will be a full Strategy Document which will be published in spring 2014. The Strategy Document will further explore the actions which will be needed to be taken by Government and the sector to maximise the sustainable, affordable deployment of solar PV in the UK. DECC will report on the outputs of the work as set out in this document including the following key aspects:
- DECC will complete further analysis of the levels of cost reduction required to deliver different levels of solar PV deployment over the next decade, and assess whether these are feasible given evidence on technology learning rates and likely sources of cost reduction in the solar sector. This analysis will be done in light of the on-going European Commission anti-dumping case against imported Chinese panels;
 - DECC will continue to work, through the Solar PV Strategy Group and in collaboration with the NSC and trade associations to determine reliable methodologies to access data on jobs and investment in the UK solar PV sector;
 - DECC will consider the distribution of potentially suitable deployment sites across domestic, commercial and industrial roofs and large-scale ground mounted sites;
 - DECC will undertake a detailed analysis of current findings to help shape solar PV policy in order for it to deliver genuine carbon reductions that help meet the UK's target of 15 per cent renewable energy from final consumption by 2020; and
 - DECC and partners will work to explore measures and technological advances to manage grid systems balancing with increasing levels of solar PV.

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APPENDIX 2: ENERGY TRENDS UK, OCTOBER TO DECEMBER 2020 AND 2020



Department for
Business, Energy
& Industrial Strategy

Energy Trends

UK, October to December 2020 and 2020

About this release

Information on energy production, trade, and consumption in the UK for total energy and by specific fuels.

In this release

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Data tables

Additional data are available online as part of the Energy Trends series:

[Total energy](#)

[Coal and derived gases](#)

[Oil and oil products](#)

[Gas](#)

[Electricity](#)

[Renewables](#)

This publication is based on a snapshot of survey data from energy suppliers. New data are incorporated in line with the [revisions policy](#).

Provisional annual summary

| | Production | Imports | Exports | Demand |
|---------------------|------------|---------|---------|--------|
| Total energy | -3% | -18% | -8% | -12% |
| Coal | -35% | -27% | +76% | -11% |
| Primary oil | -7% | -23% | -12% | -19% |
| Oil products | -17% | -25% | -10% | -23% |
| Gas | -0% | -6% | +17% | -6% |
| Electricity | -4% | -9% | +32% | -4% |

Energy consumption in 2020 was low as COVID-19 restrictions affected economic output, leisure, and travel. **Energy requirements for industrial use and services (e.g., shops, restaurants, offices) are down 8 per cent on 2019.** Despite warmer weather, domestic demand was up 2 per cent as more people stayed at home.

Transport demand dropped 28 per cent compared to 2019, led by a fall in aviation demand, down 60 per cent. This takes us to levels last seen in the mid-1980s. Diesel demand was down 17 per cent and petrol demand down 21 per cent. With petrol and diesel taken together that also takes road transport demand back to the 1980s.

Windy conditions in the Spring of 2020 meant that renewable generation reached record levels and **contributed a 42.9 per cent share of generation, outpacing for the first-time annual fossil fuel generation** which contributed 38.5 per cent of generation, a record low and down from 75.4 per cent in 2010. Despite low output from nuclear, **strong renewable performance pushed low carbon generation to a record 59 per cent.**

Data from the fourth quarter of 2020 are broadly in line with the annual trends, with low levels of consumption (down 11 per cent on the same quarter in 2019) being driven by reduced transport and commercial demand. Renewable generation remains strong, and although not at record levels it continued to provide a greater share of generation than fossil fuels during the fourth quarter.

Section 1: UK total energy

Key headlines

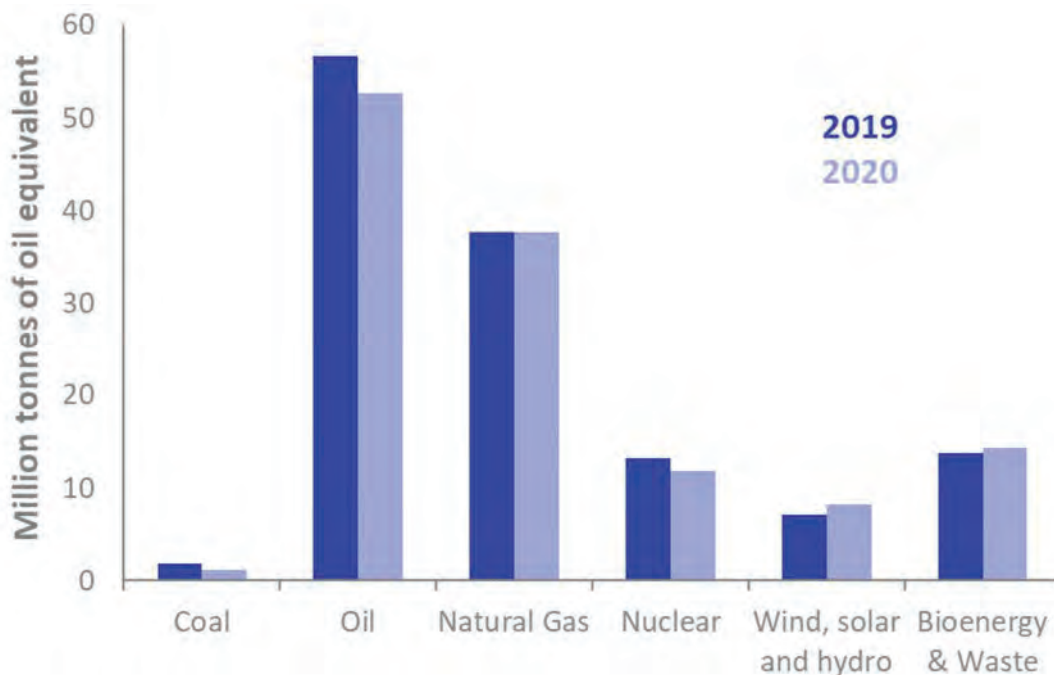
In 2020 total production was 126.0 million tonnes of oil equivalent, 3.5 per cent lower than in 2019. The most notable fall was in oil production which was mainly the result of reduced demand.

Total final energy consumption (excluding non-energy use) was 13 per cent lower than in 2019, whilst transport consumption was 28 per cent lower, both at record lows as COVID-19 restrictions reduced the demand for much of industry, commercial services and transport. On a seasonally and temperature adjusted basis, final energy consumption fell by 12 per cent with only domestic demand increasing, up 6 per cent as more people stayed at home.

In the fourth quarter of 2020 total production was 32.0 million tonnes of oil equivalent, 7.8 per cent lower than in the fourth quarter of 2019.

Final energy consumption (excluding non-energy use) fell by 11 per cent compared to the fourth quarter of 2019. Transport consumption fell by 24 per cent, other final users (mainly from the service sector) consumption fell by 8.2 per cent, industrial consumption fell by 5.3 per cent and domestic consumption fell by 0.5 per cent. On a seasonally and temperature adjusted basis, final energy consumption fell by 10 per cent, with falls in all sectors except domestic. Consumption has continued to pick up from earlier in the year but the continued impact of Covid-19 restrictions on transport demand has remained this quarter.

Chart 1.1 UK production

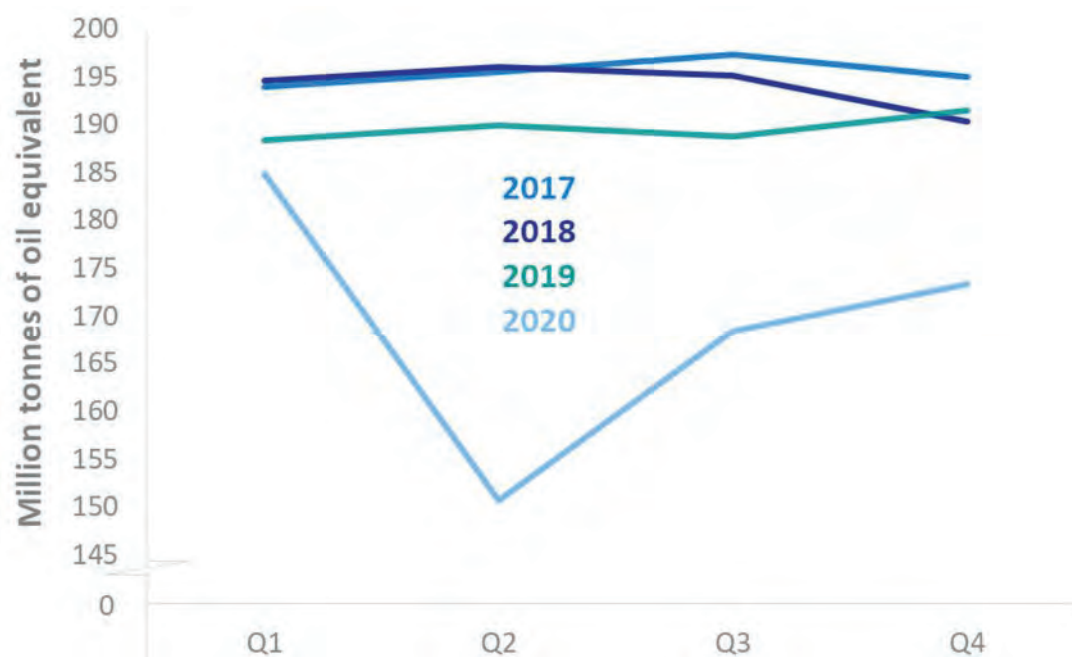


In 2020 total production was 126.0 million tonnes of oil equivalent, 3.5 per cent lower than in 2019.

Growth in renewable sources (bioenergy & waste, wind, solar & hydro) was offset by reduced fossil fuel (coal, oil & gas) and nuclear output, due to reduced demand and other disruption from the Covid-19 pandemic, and numerous outages at UK nuclear power stations.

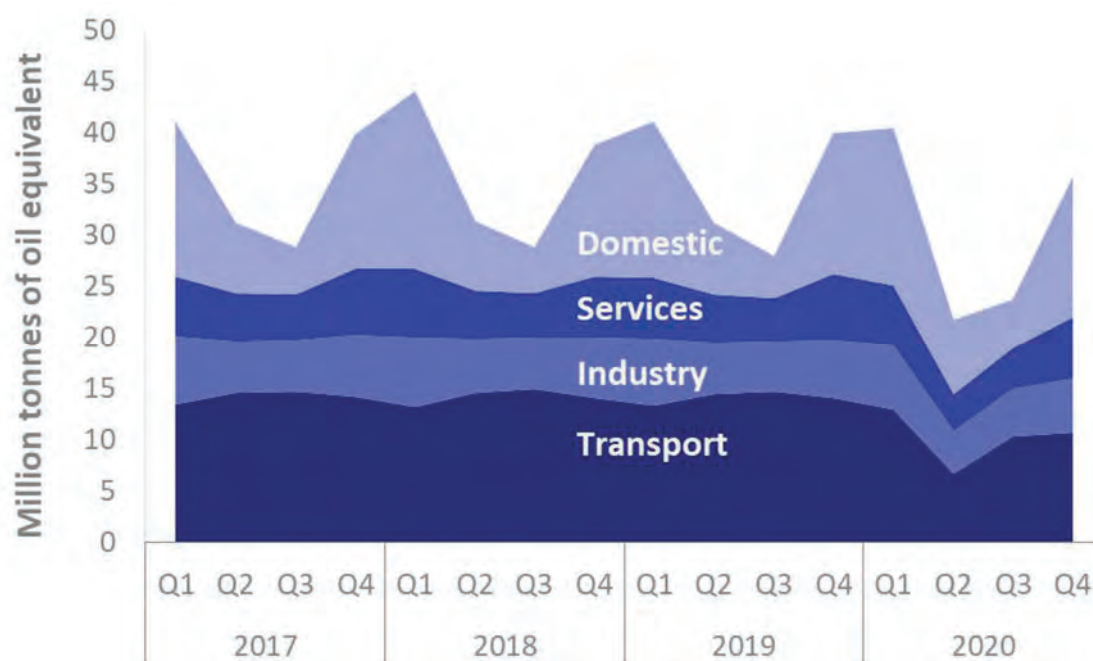
In the fourth quarter of 2020 total production was 32.0 million tonnes of oil equivalent, 7.8 per cent lower than in the fourth quarter of 2019. Production of all primary fuels fell except for wind, solar and hydro, due to growth in wind and solar capacity and more favourable weather conditions for wind generation.

Chart 1.2 Total inland consumption (primary fuel input basis)



In 2020 **total inland consumption** (this includes not only fuel use by consumers, but fuel used for electricity generation and other transformation) was 169.4 million tonnes of oil equivalent, 11 per cent lower than in 2019 – that is on a seasonally adjusted and annualised rate that removes the impact of temperature on demand. **In the fourth quarter of 2020** consumption increased 2.9 per cent on Q3 2020, as some lockdown restrictions were eased before the start of the new calendar year.

Chart 1.3 Final energy consumption by user



In 2020 total final energy consumption (excluding non-energy use) was 13 per cent lower than in 2019, and at a record low level, with consumption levels severely impacted by the Covid-19 pandemic lockdown restrictions. Domestic consumption rose by 2.1 per cent, as more people stayed at home. Transport consumption fell by 28 per cent, also to a record low level this century, as domestic and international travel was severely limited by the lockdown restrictions. Service sector consumption fell by 8.0 per cent as many schools, shops and workplaces were forced to close, whilst industrial sector energy consumption fell by 8.5 per cent. **In the fourth quarter of 2020** total final energy consumption was 11 per cent lower than in the fourth quarter of 2019.

Section 2: Coal and derived gases

Key headlines

Total coal demand in 2020 fell to 7.1 million tonnes, 11 per cent lower than in 2019. The decrease was driven by a drop in consumption by electricity generators, down 20 per cent to 2.3 million tonnes (a new record low) as coal-fired generation is phased out. Between 10th April and 12th August coal-fired generation was used on the GB grid for only one day. Following the closure of Fiddlers Ferry and Aberthaw B in March 2020, just four coal-fired power plants remain in the UK, with plans to phase these out by 2025.

Consumption of coal for coal-fired electricity generation fell to a new record low of 2.3 million tonnes, down 20 per cent compared to 2019.

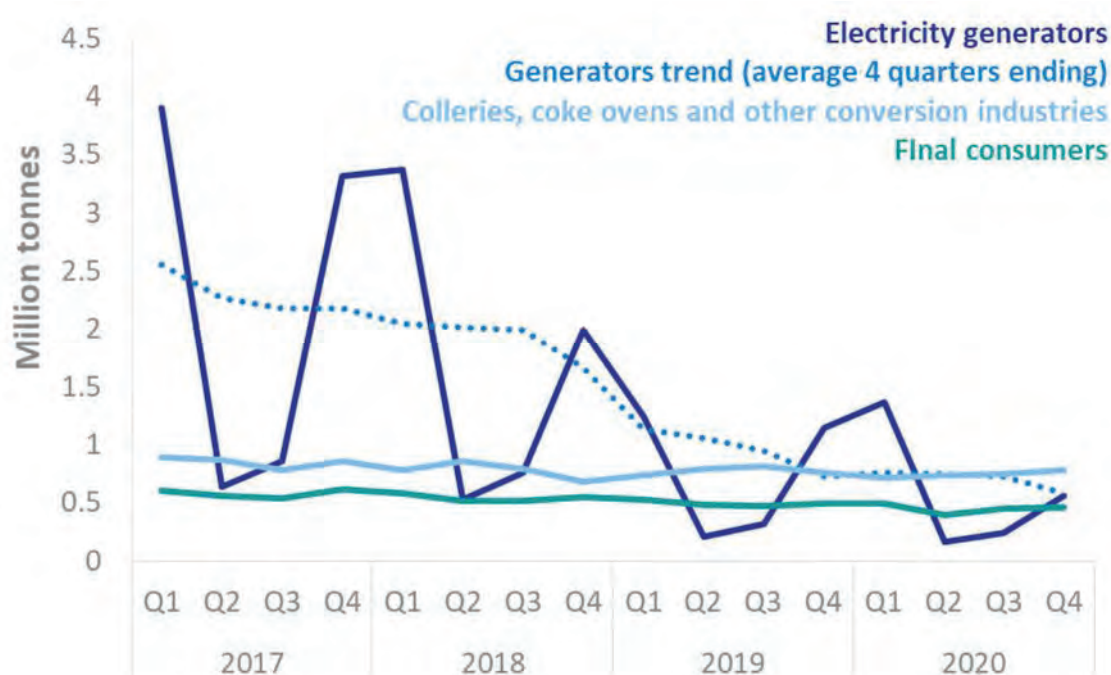
Overall coal production during 2020 fell to a record low of 1.7 million tonnes, down 35 per cent compared with 2019. Surface mining production fell to a record low of 1.6 million tonnes because of mine closures and falling demand for coal for electricity generation. In the last ten years UK coal production has fallen by 91 per cent. (Chart 2.2)

Coal imports fell to 4.5 million tonnes in 2020, 27 per cent down compared with 2019. Net imports accounted for 45 per cent of supply in 2020 (Chart 2.2). Russia (36 per cent), the USA (22 per cent) and Venezuela (21 per cent) accounted for 79 per cent of total coal imports. (Chart 2.3)

In the fourth quarter of 2020, demand for coal by electricity generators fell to 554 thousand tonnes, 51 per cent lower than in Q4 2019. This continued decline was due to high carbon prices and an increase in renewables generation. (Chart 2.1)

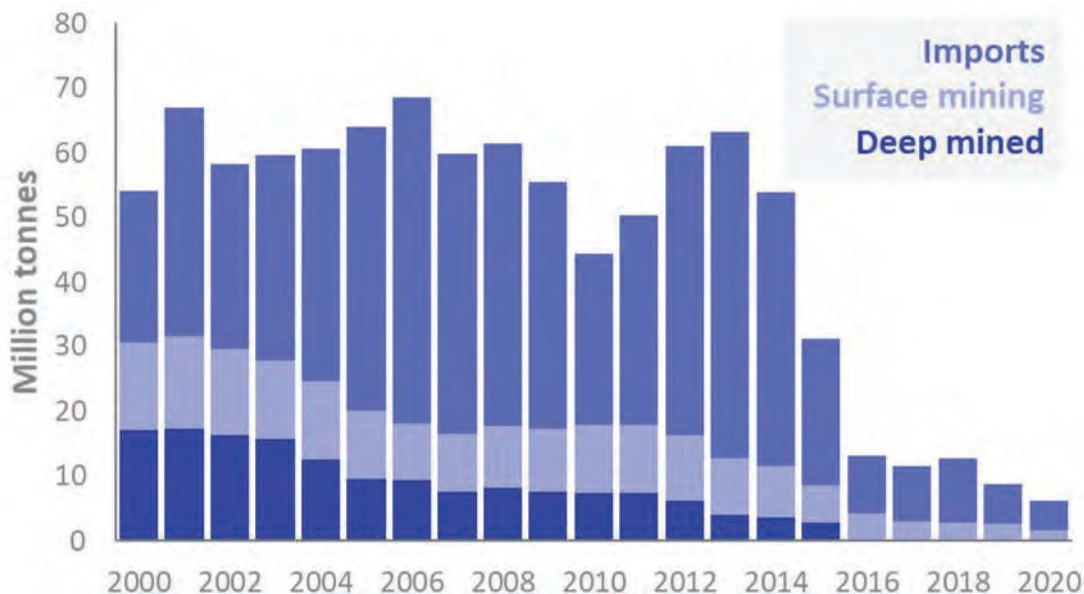
In Q4 2020, coal imports rose to 1.6 million tonnes, 29 per cent up on Q4 2019. Net imports accounted for 65 per cent of supply in Q4 2020 (Chart 2.2). Venezuela (35 per cent), Russia (30 per cent) and the USA (20 per cent) accounted for 85 per cent of total coal imports.

Chart 2.1 Coal Consumption



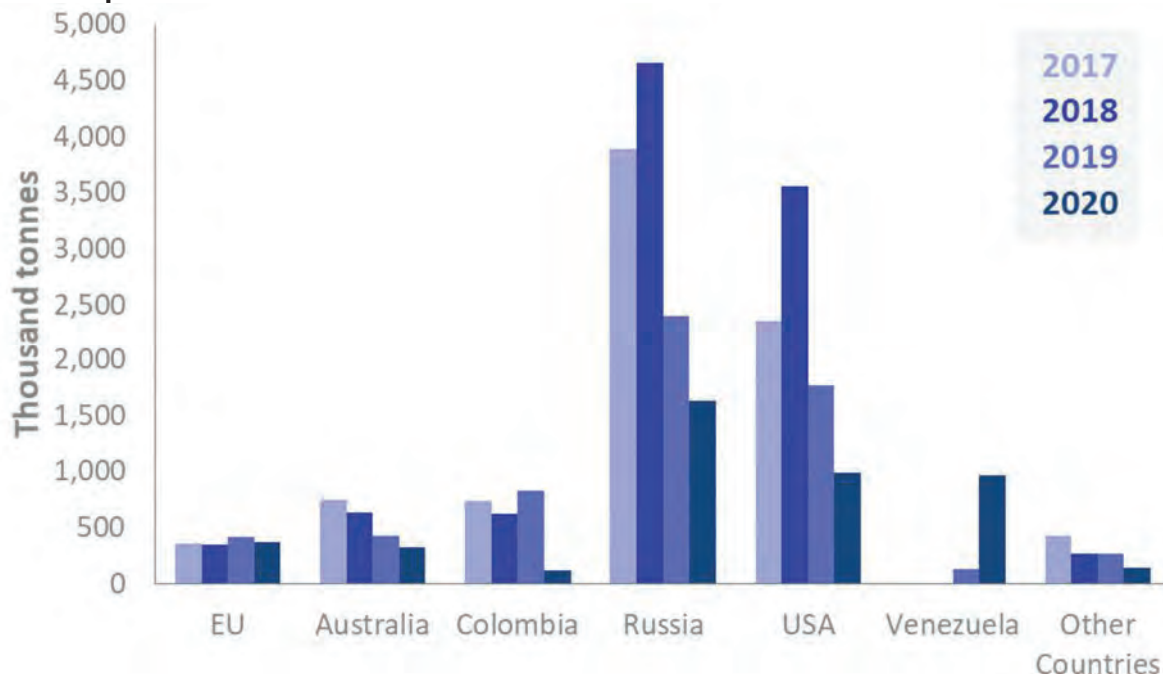
In the most recent quarter, coal demand for coal-fired electricity generation fell from 1.1 million tonnes in Q4 2019 to 0.6 million tonnes in Q4 2020, a decrease of 51 per cent. Demand for coal-fired generation is seasonal, peaking in winter when conditions are cold and dark; these peaks have declined as coal-fired generation became less competitive economically and is displaced by gas and renewable sources.

Chart 2.2 Coal Supply



Domestic coal production has fallen steadily because of coal mine closures and reduced demand. Imports filled the gap but have also fallen as overall demand dropped. Imports fell 81 per cent from 23 million tonnes in 2000 to 5 million tonnes in 2020 due to a drop in demand for coal.

Chart 2.3 Coal Imports



In 2020 Russia remained the largest exporter of coal to the UK with a share of 36 per cent. This was followed by the USA with 22 per cent. Venezuela, which had not exported any coal to the UK in 2018 had moved up to third with 21 per cent.

In Q4 2020 Venezuela (35 per cent), Russia (30 per cent) and the USA (20 per cent) accounted for 85 per cent of total coal imports.

Section 3: Oil and oil products

Key headlines

In 2020 the UK's total production of primary oils exceeded refinery demand for the first time since 2004 as refinery demand dropped because of the Covid-19 pandemic. Total demand for primary oils was down 19 per cent on 2019 with refinery production following suit and dropping to its lowest ever level.

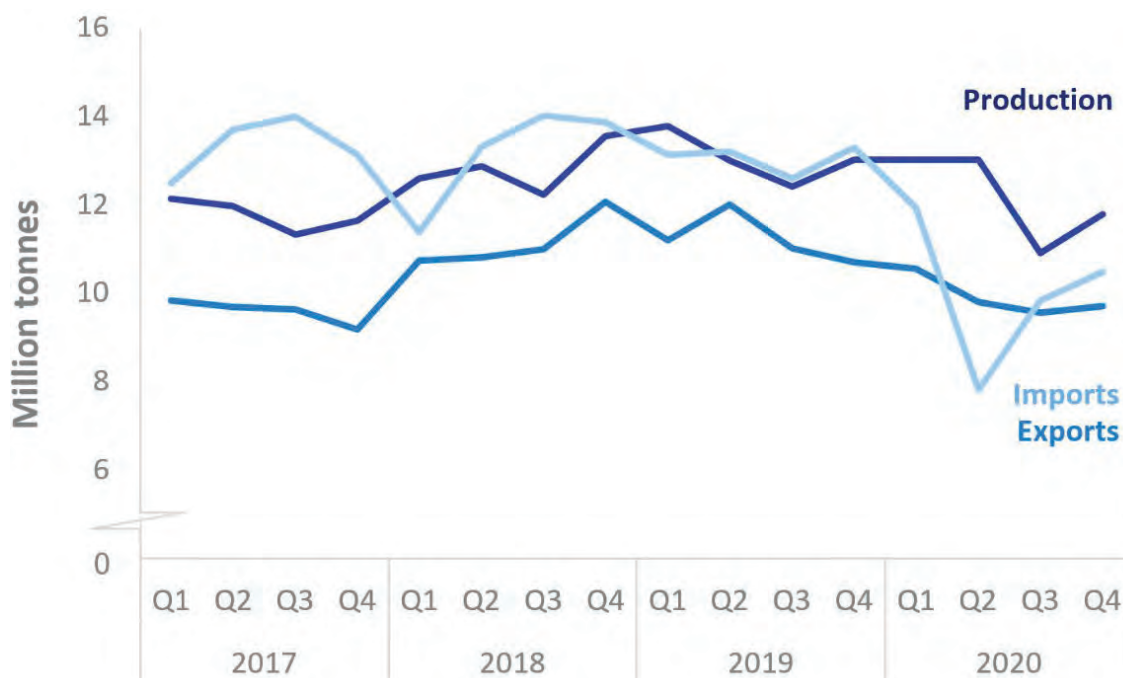
Final consumption of petroleum products, in 2020, was 24 per cent lower than in 2019. The restrictions imposed in response to the pandemic had differing effects on specific sectors. Domestic consumption saw an increase of 11 per cent, as more people stayed at home. Demand for key road fuels was significantly reduced, by 21 and 17 for petrol and diesel respectively. The biggest decrease was the contraction in demand for jet fuel, down 60 per cent on last year, the lowest level since 1984. (Chart 3.3 and Chart 3.4)

In Q4 2020 indigenous production of primary oils was down 9.5 per cent compared to Q4 2019, following delayed maintenance. Imports remain just over a fifth lower than in Q4 2019, whilst exports were down 9.3 per cent. However, there are cautious signs of recovery following increases compared to the two previous quarters.

Demand for petrol remained low, down 15 per cent in Q4 2020 compared to Q4 2019. Diesel was down 9 per cent for diesel. Demand for aviation fuel also remains low, only one-third of the levels seen in Q4 2019. As international travel restrictions were tightened demand decreased by 12 per cent following an increase in Q3 2020. (Chart 3.4)

In 2020, the Covid-19 pandemic and consequent restrictions saw total demand for primary oils fall 19 per cent compared to 2019. This is in line with global demand, which contracted for the first time in 2020 since the 2009 financial crisis.

Chart 3.1 Production and trade of crude oil and NGLs

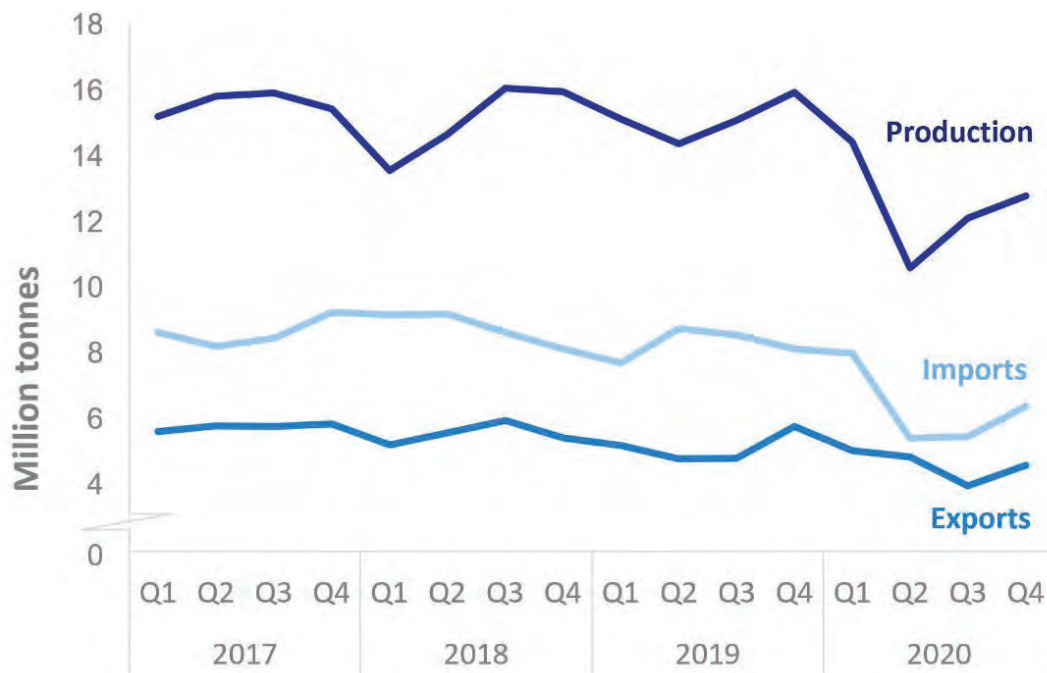


In view of reduced demand operators moved to curb production; provisional figures for 2020 show UK production of primary oils were down by 7.0 per cent on 2019. Additionally, imports and exports of primary oils were down 23 and 12 per cent respectively, as global trade and shipping reduced. This follows several years of growth since 2014 after renewed investment into several large projects on the UK Continental Shelf (UKCS).

In Q4 2020, indigenous production of primary oils was down 9.5 per cent compared to Q4 2019 following delayed maintenance. Imports of crude and NGLs were down a fifth while exports fell 6.3 per cent in Q4 2020 compared to Q4 2019; however, both were up on the previous quarter. This meant the UK was a net importer of primary oils in, by 0.8 million tonnes.

Demand for primary oils was down by more than one-fifth compared with the same period last year, although demand has increased for the second consecutive quarter by 5.7 per cent on Q3 2020 despite further restrictions to tackle a rise in Covid-19 cases.

Chart 3.2 Production and trade of petroleum products



In 2020, the Covid-19 pandemic and consequent restrictions saw total demand for petroleum products fall 23 per cent compared to 2019. In view of reduced demand refiners also moved to curb production; indigenous production of petroleum products was down 17 per cent in 2020 compared to 2019, a reduction of more than 10 million tonnes, a record low.

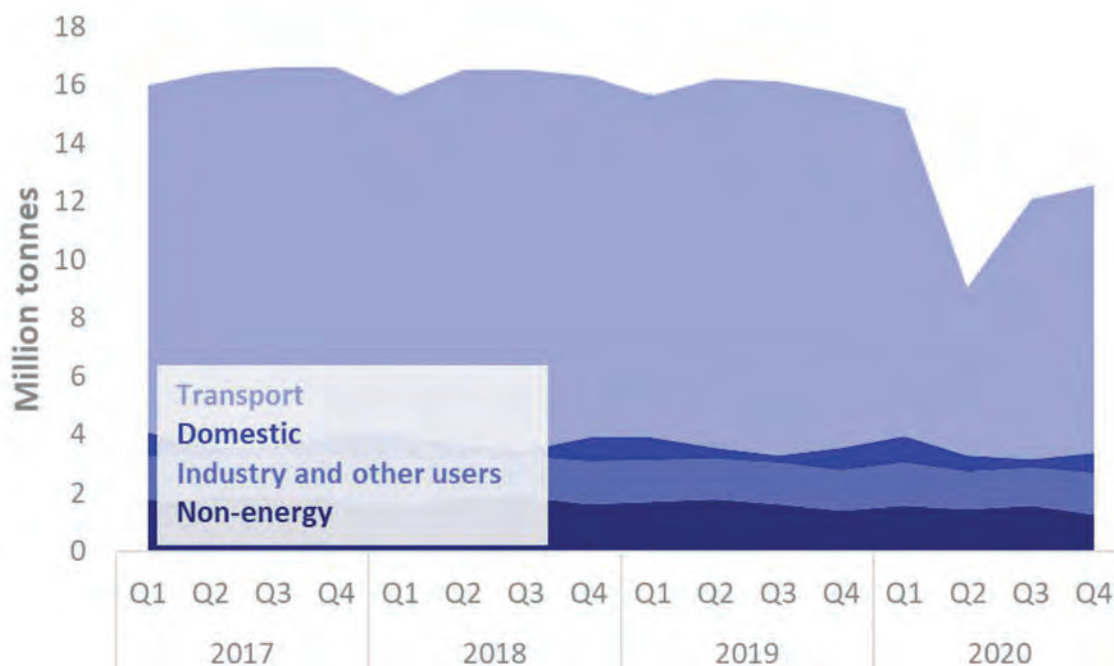
Whilst overall production was equivalent to around 95 per cent of demand, the UK produces less diesel and jet fuel than it typically needs but more petrol than it needs. The UK trades to meet demand for diesel and jet fuel, and exports excess volumes of petrol. In 2020, imports were down by 25 per cent due to reductions in transport and non-energy demand (see Charts 3.3 and 3.4). Exports were down by 10 per cent, resulting in net imports halving compared to 2019. Overall, supply of petroleum products was down 23 per cent.

In Q4 2020, total demand for petroleum products was down by just over a fifth compared to Q4 2019. This is in line with continued restrictions in place to curb the Covid-19 pandemic. Whilst demand remains down compared to 2019, Q4 has seen an increase for a second consecutive quarter despite a further national lockdown, hinting at signs of recovery.

Similarly, indigenous production of petroleum products was down 20 per cent in Q4 2020 compared to Q4 2019. Imports and exports were down 23 and 21 per cent, respectively. The UK remains a net importer of petroleum products by 1.7 million tonnes.

In 2020, restrictions on movement to combat the Covid-19 pandemic, resulted in a fall in demand of key road fuels. In 2020, transport use, which accounts for more than three-quarters of UK final consumption, was down 29 per cent compared to 2019 (see Chart 3.4).

Chart 3.3 Final consumption of oil



Demand for aviation turbine fuel was hit most severely with a decline of 60 per cent compared to 2019 due to international travel restrictions being in place for large parts of the year. Annual consumption of petrol decreased by 21 per cent while road diesel decreased by 17 per cent. This drop was greater for petrol than diesel because commercial fleets tend to be diesel engine vehicles some of which continued to run during the UK's periods of restricted movement. This is supported by DfT road traffic movement data¹ which shows a larger fall in miles travelled by car compared to heavy and light goods vehicles during the pandemic.

Domestic consumption increased by 11 per cent as more people stayed at home due to the pandemic. In addition, low oil prices in early 2020 caused by excess stocks led to a bump in demand in the summer months as consumers took advantage of lower prices for burning oil.

Industry and other final user's consumption decreased by 10 per cent and non-energy use of oil products was down by 9.2 per cent compared to 2019.

In Q4 2020, demand for petroleum products remains low, down by one-fifth compared to Q4 2019. However, demand was up 3.6 per cent on Q3 2020; the second consecutive increase after the record lows seen in Q2.

Demand for petrol marginally increased in Q4 2020 compared with Q3 2020 despite further restrictions to tackle a rise in Covid-19 cases. Demand for road diesel increased by 7.3 per cent and was met through increased imports. Conversely, tighter international travel restrictions saw jet fuel demand fall by 12 per cent compared to Q3 2020, remaining two-thirds below Q4 2019 levels. Notably domestic consumption in Q4 2020 more than doubled on Q3 2020 as customers took delivery to re-fill storage tanks as temperatures cooled.

¹ <https://www.gov.uk/government/collections/road-traffic-statistics>

Section 4: Gas

Demand for gas in 2020 fell by 6.2 per cent compared to 2019, to 805 TWh, the lowest level seen since 2015. This was due to restrictions in place to curb the Covid-19 pandemic. The service and industrial sectors were hard hit and demand for gas for electricity generation fell by 14 per cent in light of reduced demand for electricity in addition to increased output from renewables. Conversely, domestic demand for gas increased by 0.8 per cent to 301 TWh because of stay-at-home orders and despite warmer weather.

In 2020, imports of natural gas were down compared to 2019 at 478 TWh. Whilst pipeline imports fell by 12 per cent, imports of Liquefied Natural Gas (LNG) remained substantial and increased by 4.8 per cent compared to 2019. The share of imports that were LNG reach 62 per cent in Q2 a record high. Exports increased by 17 per cent in 2020, largely due to increased exports to the Netherlands as an import pipeline was converted to an interconnector that allows two-way flows between the UK and the Netherlands.

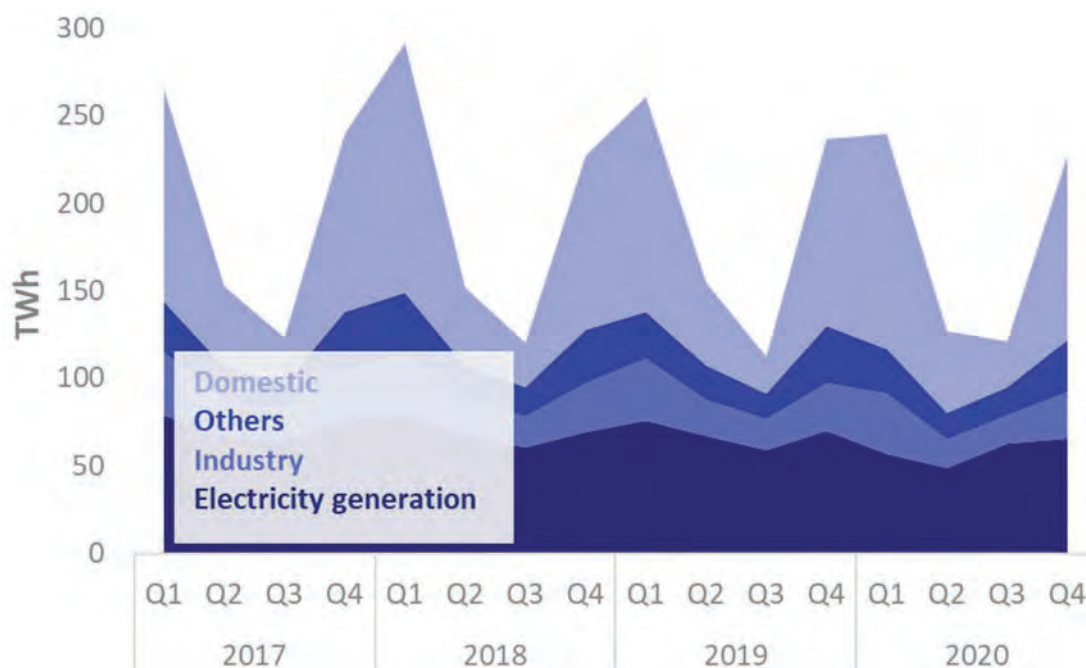
In Q4 2020, UK demand for natural gas was 252 TWh, down 4.2 per cent compared to Q4 2019. This is in line with the annual trend and shows the impact of the second national lockdown and further regional restrictions in response to the Covid-19 pandemic. In addition, warm temperatures and reduced demand for electricity generation due to increased renewable output, saw a decline in demand in all sectors.

Production was down 9 per cent compared Q4 2019 following delays to maintenance earlier in the year.

Net imports were down 3.4 per cent compared to Q4 2019. Imports of LNG remain substantial but were down 39 per cent compared to Q4 2020, when near record levels were recorded.

In 2020, UK gas demand decreased by 6.2 per cent on 2019 to 805 TWh. This was due to restrictions in place to curb the Covid-19 pandemic, this most heavily impacted industry and commercial and public sectors (both of which fall under other final users, Chart 4.1).

Chart 4.1 UK demand for natural gas

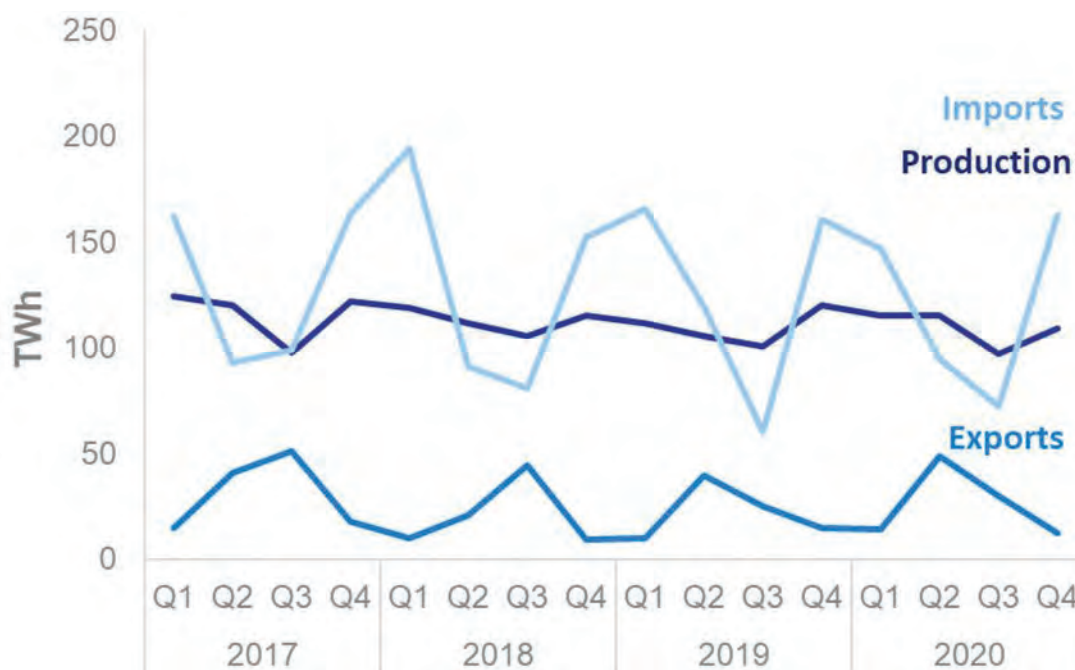


Conversely, as households changed their behaviours in line with stay-at-home orders, domestic demand saw a slight increase of 0.8 per cent; this is despite 2020 being warmer than 2019. Overall, final consumption was down 2.3 per cent in 2020.

Demand for gas used for electricity generation was down by 14 per cent to 233 TWh. This was caused by a fall in demand for electricity as well as increased renewable output.

In Q4 2020 UK demand for natural gas fell by 4.2 per cent compared with Q4 2019, broadly in line with annual trends for 2020. The impact of a second national lockdown and further regional restrictions saw a decline in demand for gas in all sectors. Demand of other final users was down 9.2 per cent on Q4 2019 showing the impact on the service sector. Domestic demand for gas fell by 1.1 per cent less than expected given warmer temperatures. Finally, demand for electricity generation fell 6.1 per cent compared to Q4 2019.

Chart 4.2 Production and trade of natural gas

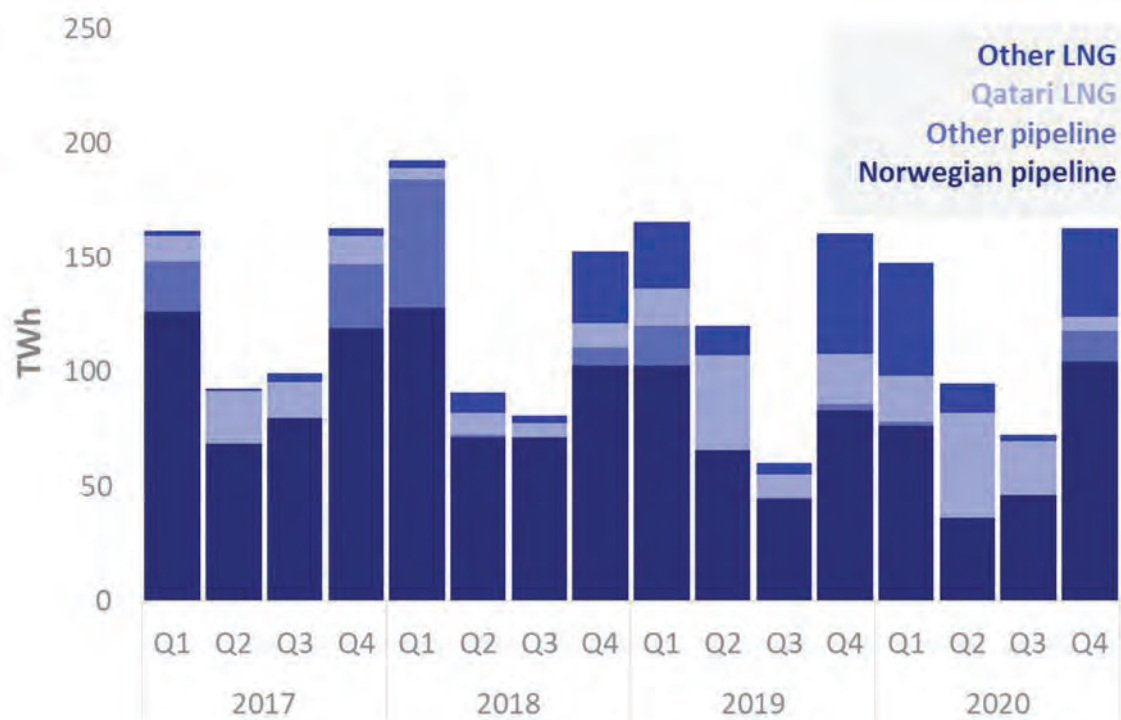


In 2020, gross gas production was stable on 2019. Maintenance which usually takes place in the summer was pushed back into Q3 as operators moved to comply with social distancing. Imports were down 5.8 per cent reflecting lower demand particularly for electricity generation. Conversely, exports increased by 17 per cent largely because of increased trade to the Netherlands.

The Bacton-Balgzand Line (BBL) was converted from an import pipeline to an interconnector at the end of 2019 allowing flows in both directions between the Netherlands and the UK. Substantial exports from the UK to the Netherlands began in April 2020. Exports to the Netherlands will support a UK oversupply in summer months following the closure of storage facilities and amidst declining production in the Netherlands. In 2020, this resulted in record exports to the Netherlands which were more than three times higher than in 2019.

In Q4 2020, gross gas production was down 9 per cent on Q4 2019, following delayed maintenance due to the Covid-19 pandemic. Net imports were down 3 per cent compared to Q4 2019, reflecting stable imports and a decline in exports of 15 per cent as trade between the UK and Netherlands reversed for winter.

Chart 4.3 Imports by origin



In 2020, imports from Norway were down 11 per cent on 2020. However, Norway remains the largest import source making up 55 per cent of total imports; this is down from 58 per cent in 2019 and 73 per cent in 2018. Imports from the Netherlands were down 36 per cent in line with the conversion of the BBL interconnector.

In 2020, LNG imports were substantial, increasingly marginally by 4.8 per cent compared to 2019 (see special article Supply of Liquefied Natural Gas in the UK, 2020 later in this publication). LNG made up 42 per cent of all gas imports, up from 39 per cent in 2019. Imports of LNG were particularly high in the first half of 2020, reaching 62 per cent of total imports in Q2. Qatar remains the dominant import source of LNG, contributing to 48 per cent of total LNG in 2020, stable on 2019. As new projects have come on stream, the number of LNG import sources has increased in recent years. Notably in 2020, imports from the US increased by 72 per cent on 2019. For further analysis of UK LNG in 2020 see special feature article 'Supply of Liquefied Natural Gas in the UK, 2020'.

In Q4 2020, LNG imports were down 39 per cent compared to Q4 2020, when near record levels were recorded. Despite this LNG imports remain substantial. The US was the largest supplier of LNG to the UK, comprising 49 per cent of total LNG imports, the highest share of LNG imports for the US on record. Although typically the largest LNG supplier, Qatar's share of LNG imports fell to just 14 per cent in Q4 2020 and was only the third largest LNG supplier, behind Russia and the US.

Section 5: Electricity

Key headlines

Electricity demand and generation in 2020 were both the lowest values on their respective data series as the Covid-19 restrictions reduced demand. Final consumption of electricity was 281 TWh in 2020, a decrease of 4.7 per cent on 2019, driven by a reduction in non-domestic electricity consumption because of Covid-19 restrictions. Industrial use of electricity was down 9.0 per cent and consumption by other final users, decreased by 10.4 per cent. Domestic consumption increased by 4.0 per cent.

Total electricity generated in 2020 was 313 TWh, 3.7 per cent less than in 2019, reflecting the lower demand for electricity during 2020. Generation from renewable sources increased year on year and in 2020 exceeded the generation from fossil fuels for the first time in the published data series. Renewable sources generated 134 TWh in 2020, an increase of 11 per cent. In contrast, 2020 saw generation from nuclear (50 TWh) and fossil fuels (121 TWh) at the lowest values on the published data series.

Quarter 4 of 2020 saw lower electricity demand and generation than Quarter 4 2019. Demand was down by 2.1 per cent while total generation decreased by 2.6 per cent. Electricity consumed by the industrial sector fell by 4.8 per cent while consumption by other final users decreased by 8.9 per cent. This reflects the ongoing Covid-19 restriction on business and industry. Domestic electricity consumption increased by 5.3 per cent as people continued to spend more time at home, including increased working from home.

Renewable electricity generation was 34.4 TWh in Quarter 4 2020, an increase of 4.5 per cent compared to the same period in 2019. Nuclear generation fell by 8.0 per cent in Quarter 4 2020 to 14.4 TWh as outages continued at many of the UK's nuclear plants. Generation from fossil fuel totalled 34.2 TWh, slightly lower than the generation from renewables and a decrease of 6.3 per cent compared to Quarter 4 2019.

Final consumption of electricity was 284.4 TWh in 2020, a decrease of 4.7 per cent compared to 2019. This was driven by a substantial reduction in non-domestic electricity consumption due to restrictions introduced as a result of the Covid-19 pandemic.

Chart 5.1 Electricity consumption by sector

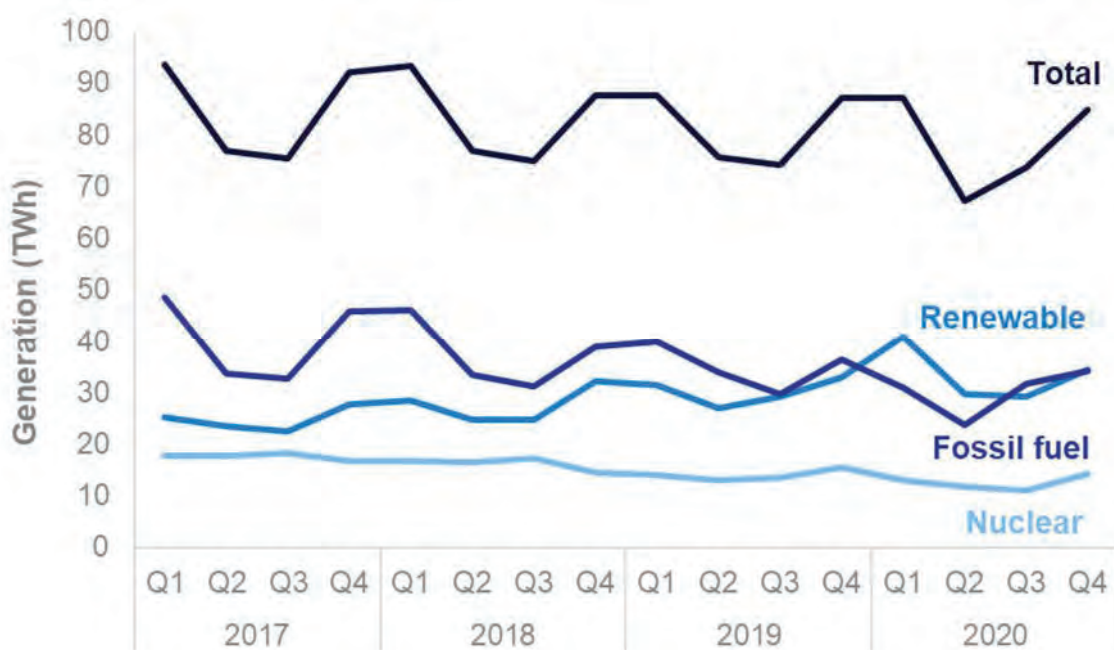


Industrial use of electricity, including iron and steel, was down 9.0 per cent in 2020 compared to 2019, and consumption by other final users, including commercial use, decreased by 10.4 per cent. Conversely, domestic consumption increased by 4.0 per cent, reflecting the increase in time spent at home.

Consumption was lower in each quarter of 2020 than the same quarter in 2019. The largest decrease was in Quarter 2, where it was down 12.3 per cent compared to Quarter 2 2019 as the first national lockdown took effect. The Covid-19 restrictions have also changed seasonal trends in domestic consumption. In 2019 and in earlier years, domestic consumption was higher than non-domestic in Quarter 1 and Quarter 4 of the year and lower in Quarters 2 and 3. For 2020, all four quarters of the year had domestic consumption similar to or higher than levels of industrial and other non-domestic consumption.

Quarter 4 of 2020 saw overall consumption levels that were more like Quarter 4 of 2019, despite a second national lockdown in November. Final electricity consumption was down by 2.2 per cent in Quarter 4 of 2020, in comparison with the same period in 2019, again linked to lower non-domestic consumption as the activities of business and industry were restricted. Though the overall consumption was similar, the splits by sector show differences in how each was affected. Electricity consumed by the industrial sector fell by 4.8 per cent compared to Quarter 4 2019, broadly mirroring the contraction shown in the manufacturing Index of Production. Consumption by other final users (including the commercial sector) decreased by 8.9 per cent. The decreases in non-domestic consumption were offset by an increase in domestic electricity consumption of 5.3 per cent. This reflected people continuing to spend more time at home and was seen despite higher average temperatures which would usually reduce domestic electricity demand for heating.

Chart 5.2 Electricity generated, by fuel



Total electricity generated in 2020 was 312.8 TWh, 3.7 per cent less than in 2019 (324.8 TWh). This reflects lower demand for electricity during 2020 due to the Covid-19 restrictions. There was also a change in the sources of electricity, with a 5.2 per cent decrease in generation by Major Power Producers (MPPs) to 255.2 TWh, partly offset by a 3.6 per cent increase in generation from other generators to 57.6 TWh. Net imports also fell to 17.9 TWh, down by 15 per cent compared to 2019.

Generation from renewable sources has been increasing year on year and in 2020 exceeded the generation from fossil fuels for the first time in the published data series. Renewable sources generated 134.3 TWh in 2020, an increase of 11 per cent. In contrast, generation from fossil fuels was down 14 per cent to 120.5 TWh. This was also shown in the shares of generation, with the share coming from renewables rising sharply to 42.9 per cent, compared to the 38.5 per cent generated from fossil fuels (38.5 per cent). As chart 5.2 shows,

renewable generation exceeded fossil fuel generation in Quarters 1, 2 and 4 of 2020 and was only slightly lower in Quarter 3.

The increase in renewable generation in 2020 was driven by high levels of generation from wind, which increased by 18 per cent compared to 2019. This was supported by favourable conditions for generation and increased capacity, particularly for offshore wind, which generated 26 per cent more electricity in 2020 than in 2019. Shares of generation increased for all renewable technologies with wind generation accounting for almost a quarter of 2020's total at 24.2 per cent, an increase of 4.4 percentage points (pp).

Generation from nuclear was 50.3 TWh in 2020, the lowest on the published data series and a decrease of 11 per cent compared to 2019. This was due to a series of statutory and unplanned outages at the UK's nuclear plants over the year. Despite the lower nuclear generation, the share of generation from low carbon sources increased again in 2020 to 59.0 per cent, up 4.6 pp compared to 2019, due to high generation from renewables.

Fossil fuel generation in 2020 was the lowest value on the published data series at 120.5 TWh, 38.5 per cent of electricity generated. While fossil fuel generation has been decreasing year on year since 2010, the lower demand in 2020 reduced the use of coal and gas generators even further. The fall in the use of fossil fuels has largely been driven by a significant reduction in coal generation, which has fallen from a fifth of generation in 2015 to just 1.7 per cent in 2020. Just four coal plants are currently operational in the UK, with these expected to be closed by October 2024. Gas generation also fell in 2020, down 13 per cent compared to 2019 to 114.1 TWh. Gas continues to be the dominant fuel in the UK generation mix, generating 36.5 per cent of the total in 2020, although this was down 4.1 pp compared to 2019.

Quarter 4 of 2020 saw total electricity generation of 84.9 TWh, which was a 2.6 per cent decrease compared to Quarter 4 2019. This was in line with the 2.1 per cent decrease in demand over the same period. Though generation was lower than in the same period of 2019, it was closer to normal seasonal levels of generation than the lower levels seen in previous quarters of 2020 because of the UK's COVID-19 restrictions.

Renewable electricity generation was 34.4 TWh in Quarter 4 2020, representing 40.5 per cent of total electricity generation, supported by increased capacity and favourable conditions for renewable generators. This was the third quarter in 2020 in which the renewable generation exceeded the generation from fossil fuel, though the difference was smaller than in Quarters 1 and 2 of 2020. The high renewable generation was particularly driven by high generation from offshore wind, which generated 12.0 TWh in Quarter 4 2020, a 16 per cent increase on the previous year and in line with increased offshore capacity. In contrast, solar generation fell by 8.1 per cent in Quarter 4 2020, despite increased capacity, as solar generators were restricted by lower average daily sun hours than in Quarter 4 2019.

Nuclear generation fell by 8.0 per cent in Quarter 4 2020 compared to the previous year with 14.4 TWh generated by nuclear power. During this time, maintenance outages continued at Hartlepool, Heynsham 1, Hunterston B and Dungeness B, and finished at Hinkley Point B and Sizewell B. Despite relatively low nuclear generation, low carbon sources generated 57.4 per cent of the total in Quarter 4 2020, up 1.8 percentage points on the previous year, supported by high renewables generation.

Generation from fossil fuels was 34.1 TWh in Quarter 4 2020, which was down 6.3 per cent compared to Quarter 4 2019. This represented 40.3 per cent of total generation, a 1.6 pp decrease on the previous year. Gas remained the fuel with the highest generation at 32.6 TWh, although this was a decrease of 3.0 per cent compared to Quarter 4 of 2019. Coal generation remained low at just 1.3 TWh, 1.5 per cent of UK generation, half of the share of generation in Quarter 4 2019 and a new record low.

Section 6: Renewables

Key headlines

In 2020, renewable generation increased by 11 per cent (13.8 TWh) to a record 134.3 TWh, outstripping generation from fossil fuels for the first time. Offshore wind generation accounted for most of the increase with high wind speeds and some added capacity. Overall, renewables accounted for 42.9 per cent of total generation another new record.

Renewable capacity growth began to slow in mid-2019 and this continued during 2020, with less than 1 GW (2.0 per cent) added during the year, the lowest percentage increase seen since 2010 (see chart 6.2).

In the last quarter, renewable electricity generation was 34.4 TWh in 2020 Q4, 1.5 TWh (4.5 per cent) more than 2019 Q4 with almost half the increase being in offshore wind, due to added capacity and higher wind speeds. Generation for some technologies fell; plant biomass (by 4.5 per cent), Solar PV (8.1 per cent), and landfill gas (5.2 per cent).

Renewables' share of total generation was 40.5 per cent in 2020 Q4, higher than in quarters two and three but below the record achieved in Q1 (47.1 per cent), when wind generation was unusually high with the effects of storms Ciara and Dennis.

Chart 6.1 Change in renewable generation and capacity between Q4 2019 and Q4 2020

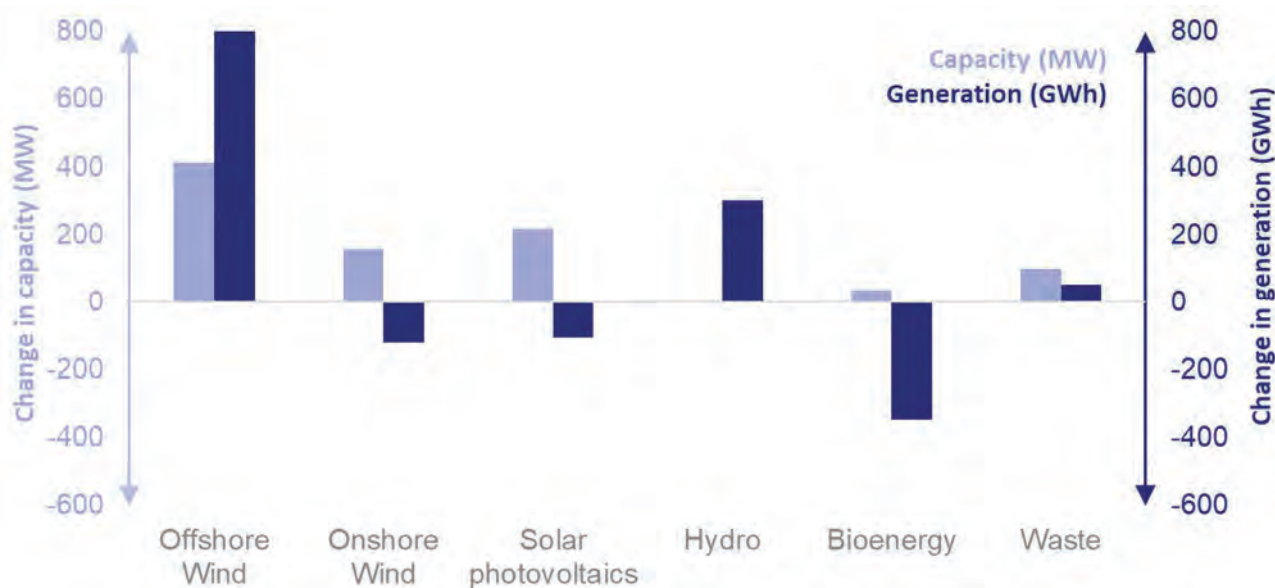
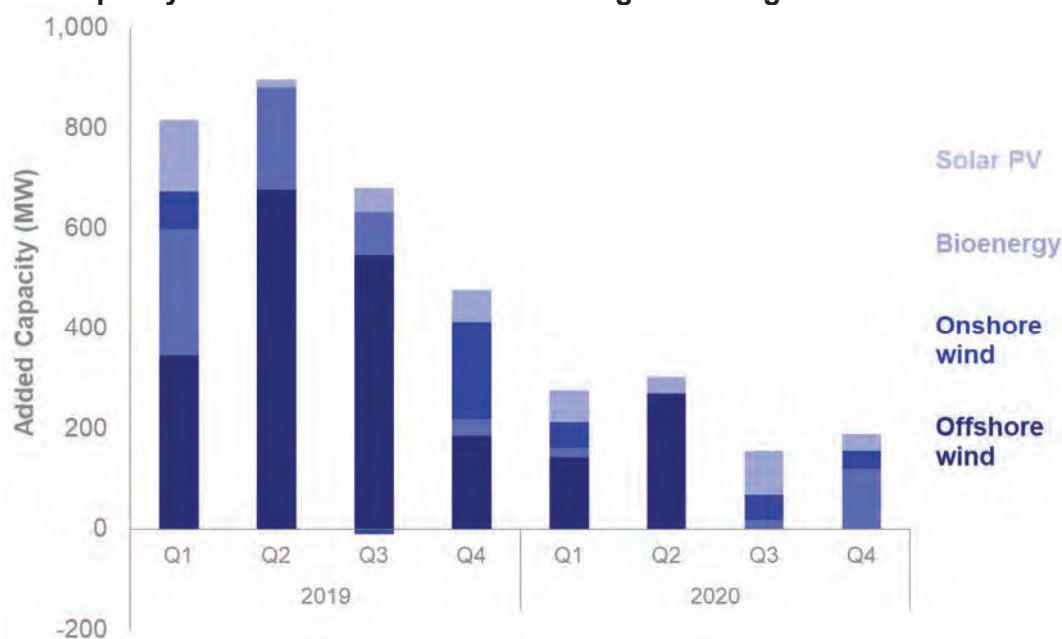


Chart 6.1 shows increases in capacity by technology compared to changes in generation since 2019 Q4; where capacity and generation trends conflict, it tends to indicate the dominance of weather conditions. Offshore wind generation increased by 16 per cent in response to both higher wind speeds and added capacity (0.4 GW, the largest new site being East Anglia 1). Onshore wind also saw added capacity (0.2 GW) but generation fell by 1.3 per cent, despite the higher wind speeds. Wind speeds vary across the UK and with 80 per cent of wind generation being in Scotland, this can dominate UK generation. Generation was also affected by several wind farms having to curtail their generation at times when supply exceeded demand.

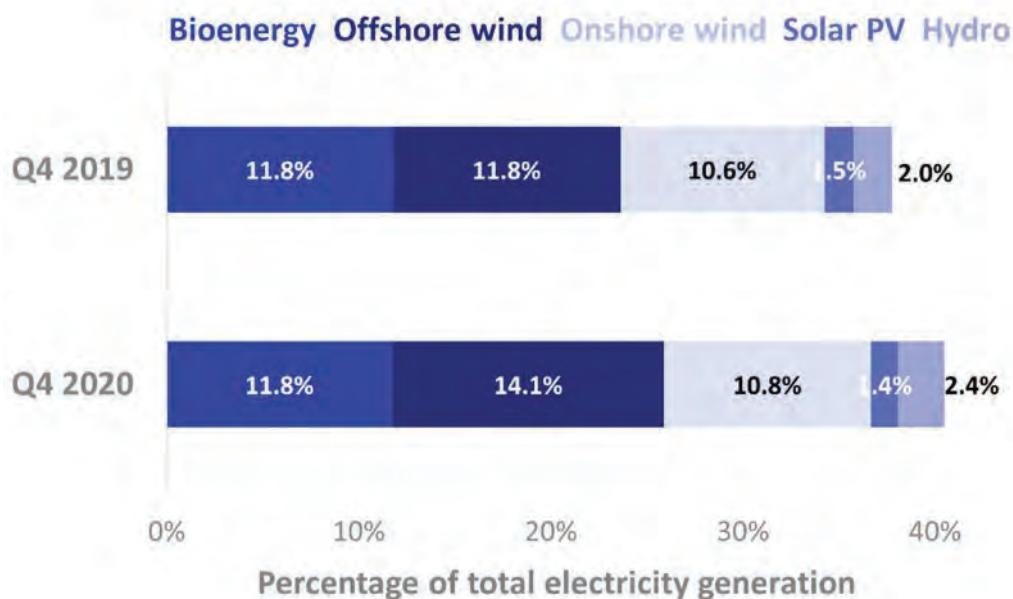
Solar PV generation fell by 8.1 per cent with shorter sunlight hours more than offsetting a modest 1.6 per cent increase in capacity². Hydro generation increased 17 per cent, because of higher average rainfall³.

Chart 6.2 Added capacity in 2019 and 2020 for the leading technologies



In total, renewable capacity grew by just 2.0 per cent during 2020, the lowest growth rate since at least 2010, compared with an average growth of almost 20 per cent during the preceding ten years. Some quarters saw no added capacity for certain technologies; in Q2, there was no increase for onshore wind and bioenergy and in quarters three and four there was no new offshore wind capacity, which had previously seen large increases. Although growth in onshore wind capacity had already fallen towards the end of 2019, it was still higher than in 2020 (574 MW added in 2019, compared with just 157 MW in 2020). New Solar PV capacity also slowed in 2020, though to a lesser extent, with 217 MW being added in 2020 compared with 273 MW in 2019. Although uncertain, Covid-19 restrictions may have caused delays in some projects.

Chart 6.3 Renewables' share of electricity generation – Q4 2019 and 2020



² The Feed in Tariff (FiT) scheme² closed March 2019. BEIS continues to monitor small scale generation using the Central FiTs Register, and Micro Generation Certification Scheme (MCS) registrations and the Renewable Energy Planning Database (REPD). Currently excluded are unsubsidised installations below 1MW not MCS registered. We are reviewing data sources to improve coverage.

³ See technical information page for links to weather data.

In 2020 Q4, renewable's share of generation was 40.5 per cent, 2.7 percentage points higher than in the same quarter in 2019, due to a combination of increasing renewable generation and a decrease in total electricity generation. The share of generation from offshore wind generation's increased from 11.8 per cent in 2019 Q4 to 14.1 per cent in 2020 Q4 whilst solar PV's share fell from 1.5 per cent to 1.4 per cent. The share of generation from bioenergy remains stable at 11.8 per cent.

In 2020, electricity generated from renewable sources was 134.3 TWh, 13.8 TWh (11.4 per cent) more than in 2019. Over 80 per cent of this increase can be accounted for by wind generation; with a modest increase in total wind capacity of just 2.4 per cent, the dominant driver was the exceptionally strong wind speeds experienced during storms Dennis and Ciara in the first quarter. Offshore wind in particular saw the highest growth rate of the technologies with generation up 27 per cent (8.5 TWh) with onshore increasing by 8.6 per cent (2.8 TWh). In 2020, for the first time, generation from offshore wind exceed that of onshore wind on an annual basis. This first occurred in 2019 Q3 and it has remained higher since. It is also the first year offshore wind's share of renewable generation has exceeded onshore, and now represents the highest share of all the technologies at 30.3 per cent with onshore representing a 26.0 per cent share.

Although bioenergy's share of renewable generation remained high at 29.3 per cent, it remains well below its share in 2009 at 42.4 per cent. Much of this decline is due to other technologies such as wind and solar's increasing penetration, the latter being in response to the Feed in Tariff. Between 2019 and 2020, bioenergy generation increased by 2.1 TWh (5.6 per cent) with most of the increase being in plant biomass. With just 9 MW of capacity added during the year (a modest 0.2 per cent increase) and no weather effects relevant to generation, most of the increase is due to lower than expected generation in 2019 as there were several plant outages.

A 100 MW capacity increase in municipal solid waste boosted generation by 0.5 TWh, a 13 per cent growth rate and anaerobic digestion also increased its capacity though to a lesser extent (27 MW, or 5.0 per cent). Both technologies saw records being achieved in 2020 alongside offshore and onshore wind, sewage sludge digestion, and plant biomass.

Hydro capacity increased marginally with just 4 MW being added, an increase of 0.8 per cent. Generation was higher in 2020 (by 9.2 per cent) mostly due to higher levels of rainfall in 2020 when compared to 2019.

Some technologies saw generation decreases in 2020 most notably landfill gas which is continuing to see falls in rates of extraction (and hence efficiencies). Generation fell by 147 GWh (4.0 per cent). Solar PV generation also decreased slightly (by just 0.9 per cent to 12.8 TWh) despite higher average sunlight hours in 2020 compared to 2019, and some additional capacity (217 MW).

Data tables and special articles

Data in this release

Data are collected by BEIS through surveys of energy suppliers. This publication highlights key stories in energy in the UK for the specified period. Additional data are available in the quarterly and monthly statistical tables for each fuel and total energy. The tables are generally in commodity balance format, showing the flow from the sources of supply through to final use.

Special articles

Special articles that explore current topics of interest are available alongside this summary report. Included in this publication are:

Supply of Liquefied Natural Gas in the UK in 2020

Capacity of UK electricity generation assets in the 21st century, 2000 to 2019

Domestic wood consumption revised baseline

Upcoming developments in dissemination of Energy Trends and the Digest of UK Energy Statistics

Statistical tables*

Data tables available as part of the Energy Trends series:

[Total energy](#)

[Solid fuels and derived gases](#)

[Oil and oil products](#)

[Gas](#)

[Electricity](#)

[Renewables](#)

The full range of special articles is available here:

<https://www.gov.uk/government/collections/energy-trends-article>

Additional sources of information

Index of Production, published by the Office for National Statistics:

<https://www.ons.gov.uk/economy/economicoutputandproductivity/output/bulletins/indexofproduction/previousReleases>

Index of Services, published by the Office for National Statistics:

<https://www.ons.gov.uk/economy/economicoutputandproductivity/output/bulletins/indexofservices/previousReleases>

Detailed annual Digest of UK Energy Statistics published on 30 July 2020:

<http://www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes>

Tables showing foreign trade flows of energy:

<https://www.gov.uk/government/statistics/dukes-foreign-trade-statistics>

Weather tables produced by BEIS using Met Office data:

<https://www.gov.uk/government/collections/weather-statistics>

Information on Energy Prices:

<http://www.gov.uk/government/collections/quarterly-energy-prices>

*Hyperlinks will open the most recently published table. If you require a previously published version of a table published by BEIS, please contact Kevin Harris:

Tel: 0300 068 5041

e-mail: kevin.harris@beis.gov.uk

Technical information

Methodology and revisions

More detailed notes on the methodology used to compile the figures and data sources are available on the collection pages for each fuel. The figures have not been adjusted for temperature or seasonal factors except where noted.

Percentage changes relate to the corresponding period a year ago. They are calculated from unrounded figures. They are shown as (+) or (-) when the percentage change is very large. Quarterly figures relate to calendar quarters. All figures relate to the United Kingdom unless otherwise indicated. Further information on Oil and Gas is available from the Oil & Gas Authority at www.ogauthority.co.uk/

Table of conversion factors

| To | ktoe | TJ | GWh | million therms | To | toe | GJ | kWh | therms |
|-----------------------|-------------|--------|--------|----------------|---------------|-------------|---------|--------|---------|
| From | Multiply by | | | | From | Multiply by | | | |
| ktoe | 1 | 41.868 | 11.63 | .39683 | toe | 1 | 41.868 | 11.63 | 396.83 |
| TJ | .023885 | 1 | .27778 | .0094778 | GJ | .023855 | 1 | 277.78 | 9.4778 |
| GWh | .085985 | 3.6 | 1 | .034121 | kWh | .000085985 | .003600 | 1 | .034121 |
| million therms | 2.52 | 105.51 | 29.307 | 1 | therms | .00252 | .105510 | 29.307 | 1 |

toe = tonne of oil equivalent

ktoe = thousand tonne of oil equivalent

Sector breakdowns

Categories for final users are defined by Standard Industrial Classification 2007:

| | |
|--------------------------|---|
| Fuel producers | 05-07, 09, 19, 24.46, 35 |
| Final consumers | |
| Iron and steel | 24 (excluding 24.4, 24.53 and 24.54) |
| Other industry | 08, 10-18, 20-23, 24.4 (excluding 24.46), 24.53, 24.54, 25-33, 36-39, 41-43 |
| Transport | 49-51 |
| Other final users | |
| Agriculture | 01-03 |
| Commercial | 45-47, 52-53, 55-56, 58-66, 68-75, 77-82 |
| Public administration | 84-88 |
| Other services | 90-99 |
| Domestic | Not covered |

Revisions policy

Figures for the latest periods are provisional and are liable to subsequent revision. The [BEIS statistical revisions policy](#) sets out the revisions policy for these statistics, which has been developed in accordance with the UK Statistics Authority [Code of Practice for Statistics](#).

Related publications

Recent publications of interest

Smart Meters quarterly statistics

Estimates on the roll-out of Smart Meters in Great Britain, covering meters operating and meters installed: www.gov.uk/government/collections/smart-meters-statistics

Household Energy Efficiency

Statistics on the Energy Company Obligation (ECO), Green Deal and homes insulated. Monthly updates of ECO measures and quarterly updates of in-depth ECO statistics, carbon savings and the Green Deal schemes: www.gov.uk/government/collections/household-energy-efficiency-national-statistics

Renewable Heat Incentive statistics

Statistics on deployment data for the domestic and non-domestic Renewable Heat Incentive (RHI) to support the uptake of renewable heat: www.gov.uk/government/collections/renewable-heat-incentive-statistics

Energy Consumption in the United Kingdom (ECUK)

Detailed data on end use estimates of energy in the UK: www.gov.uk/government/collections/energy-consumption-in-the-uk

Sub-national total final energy consumption

Findings of the sub-national energy consumption analysis in the UK for all fuels, for the period covering 1 January to 31 December, with gas consumption covering the annual period from mid-May: www.gov.uk/government/collections/total-final-energy-consumption-at-sub-national-level

Sub-national electricity consumption

Electricity consumption by consuming sector for Great Britain and devolved administration areas. Data are based on the aggregation of Meter Point Administration Number readings as part of BEIS's annual meter point electricity data exercise: www.gov.uk/government/collections/sub-national-electricity-consumption-data.

Sub-national gas consumption

Gas consumption by consuming sector for Great Britain, and devolved administration areas. Data are based on the aggregation of Meter Point Reference Number readings throughout Great Britain as part of BEIS's annual meter point gas data exercise. Data are subject to a weather correction factor to enable comparison of gas use over time: www.gov.uk/government/collections/sub-national-gas-consumption-data.

Sub-national road transport consumption

Road transport fuels consumption in the UK at regional and local authority level. Data is modelled and provided to BEIS by Ricardo Energy & Environment, with estimates based on where the fuel is consumed, rather than where it is purchased. www.gov.uk/government/collections/road-transport-consumption-at-regional-and-local-level

Sub-national consumption of residual fuels

Non-gas, non-electricity and non-road transport fuels consumption in the UK. Includes coal, petroleum, solid fuels, and bioenergy not for generation or road use: www.gov.uk/government/collections/sub-national-consumption-of-other-fuels

Further information

National statistics

This is a National Statistics publication. National Statistics status means that our statistics meet the highest standards of trustworthiness, quality, and public value, and it is our responsibility to maintain compliance with these standards.

The Office for Statistics Regulation confirmed continued designation of Energy Trends as National Statistics in 2018 following a compliance check. A full assessment against the Code of Practice was last conducted in June 2014.

Pre-release

Some ministers and officials receive access to these statistics up to 24 hours before release. Details of the arrangements for doing this and a list of the ministers and officials that receive pre-release access to these statistics can be found in the [BEIS statement of compliance](#) with the Pre-Release Access to Official Statistics Order 2008.

User engagement

Users are encouraged to provide comments and feedback on how these statistics are used and how well they meet user needs. Comments on any issues relating to this statistical release are welcomed.



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Supply of Liquefied Natural Gas in the UK in 2020

Key headlines

This article provides an analysis of UK trends in trade of Liquefied Natural Gas (LNG) within the context of global markets. This is one of the fastest growing commodity markets globally. In 2020 the US grew to be the third largest global exporter of LNG, after Qatar and Australia, as it continued to expand capacity.

The UK is the second largest European importer behind only Spain. European countries, including the UK, have played an important role in balancing LNG markets since 2019. Substantial imports to the UK were seen in 2020, and these were stable compared to 2019 when imports had doubled compared to the year before. However, month to month the picture was more variable with low prices contributing to high imports early in the year.

Nearly half of UK LNG imports in 2020 were from Qatar, with a further quarter from the US. Total LNG imports made up 22 per cent of gas supply to the UK in 2020, compared to 21 per cent in 2019.

Introduction

Traditionally, natural gas has been moved to markets via pipeline. Cooling natural gas to approximately -160°C changes its state from gas to liquid, producing Liquefied Natural Gas (LNG). The volume of LNG is around 600 times smaller than in its gaseous state, meaning it can be shipped easily. This provides an alternative means of transportation where pipeline infrastructure does not already exist or is not viable. Once at its destination, LNG is regasified and used in the same way as natural gas which has not been liquefied.

Global liquefaction capacity has increased consecutively for the last six years. One of the reasons for this is that easily accessible natural gas reserves are being depleted. LNG has provided an alternative to established pipeline infrastructure. As the UK has become more reliant on imports of natural gas, due to a decline in indigenous production, LNG imports have gained importance in ensuring that the UK supply portfolio remains secure and diverse.

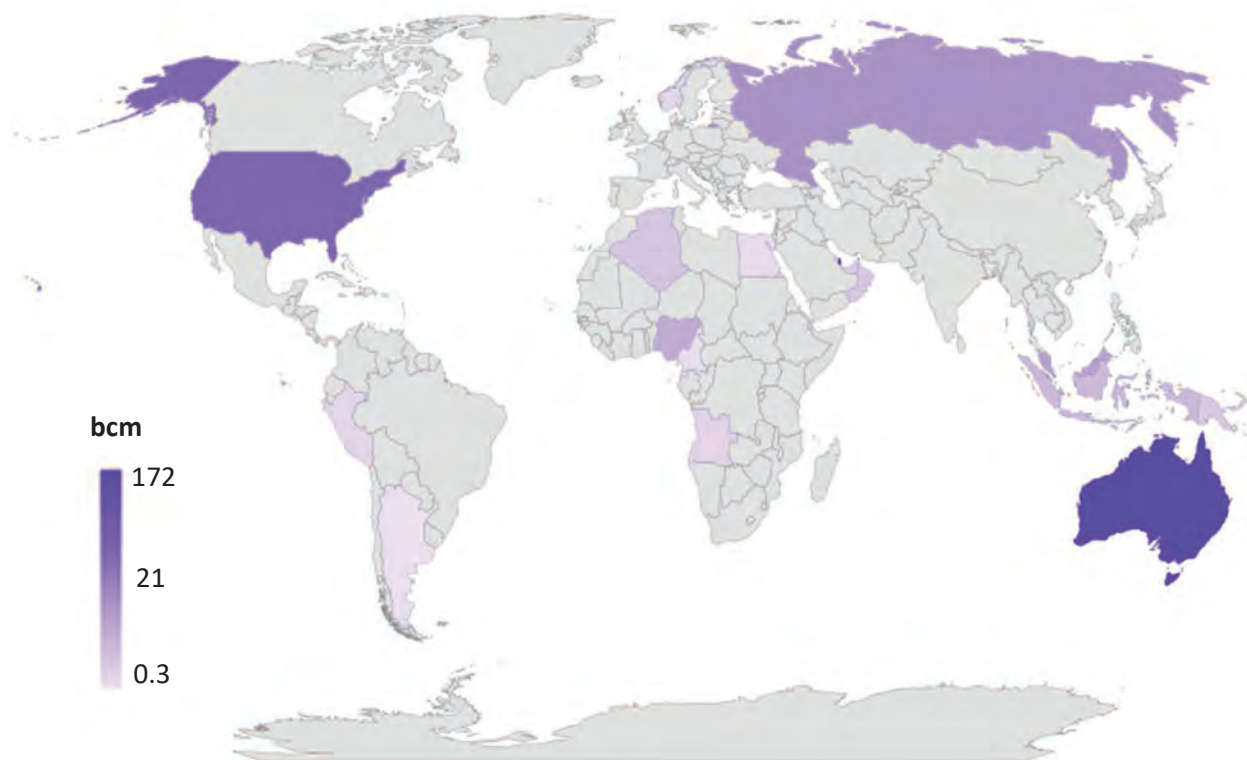
The aim of this article is to provide analysis of LNG supply to the UK (1) within the context of global LNG markets (2).

(1) UK and Europe data was sourced from the International Energy Agency (IEA) and Energy Trends: <https://www.gov.uk/government/statistics/gas-section-4-energy-trends>

(2) Global data was sourced from the Independent Commodity Intelligence Services (ICIS)

Global LNG Trade

Map 1: Global exporters of LNG by volume, 2020

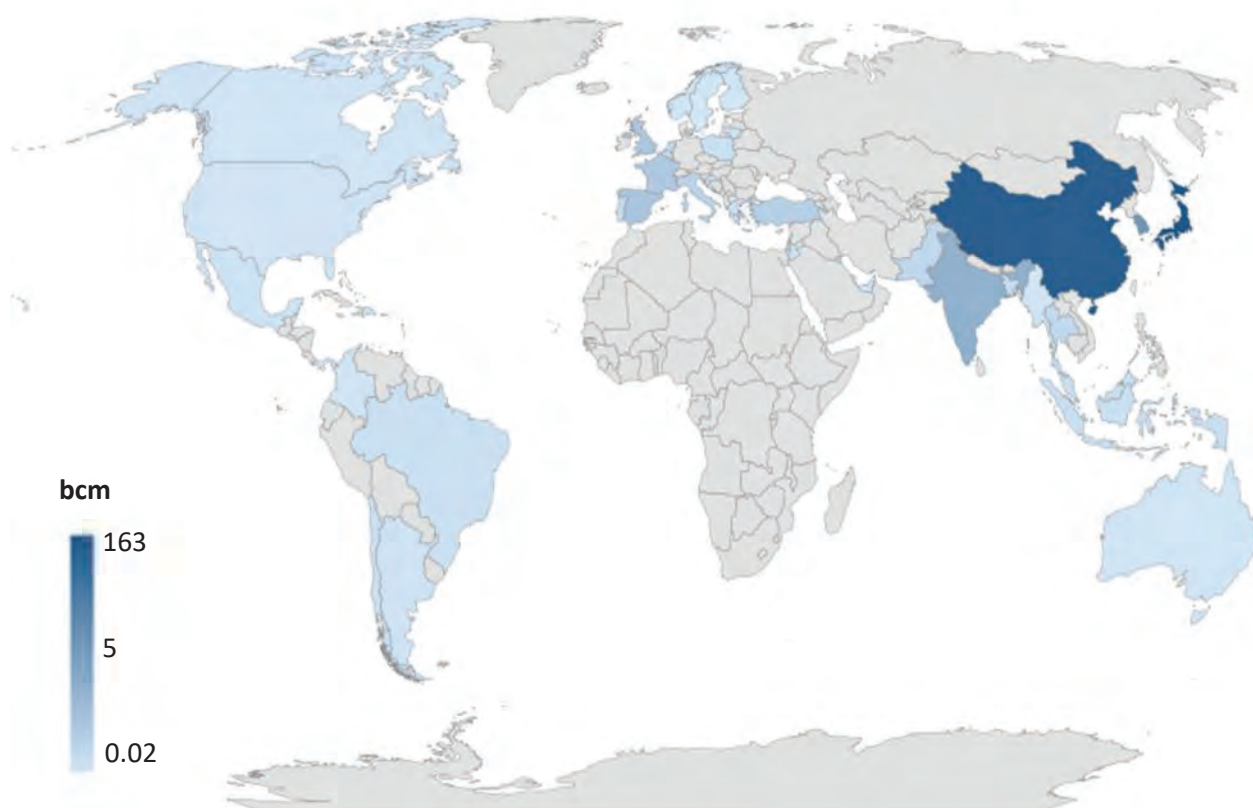


Map 1 shows global exporters of LNG. In 2020 Qatar and Australia were the largest exporters of LNG. The US moved to third largest, as it continues to expand capacity alongside the shale revolution. LNG liquefaction capacity in the US increased by over 40 per cent in 2020 and export volumes were a third higher than in 2019. Other exporters of LNG tend to be those with large natural gas reserves including Russia, Malaysia, and Nigeria. Europe is not a major exporter of LNG; the largest European exporter of LNG is Norway. European exports of LNG accounted for just 16 per cent of global exports in 2020. The UK does not produce LNG but is able to re-export imported LNG – this is called a reload.

Whilst LNG can be traded flexibly outside of existing pipeline supply routes, factors such as shipping costs and boil-off (3) mean that proximity to the market plays some role in trade. A good example of this is Australia, which supplied 39 per cent of Japanese imports in 2020, whereas the UK has only ever received one cargo from Australia.

(3) The vapours created due to the ambient heat input while maintaining constant pressure in the cryogenic storage vessel, which must be either re-liquefied, used as fuel or burned off at a gasification unit.

Map 2: Global importers of LNG by volume, 2020



Asia remained the key global LNG market. The top five importers of LNG in 2020 were Japan, China, South Korea, India, and Taiwan. Japan exclusively imports natural gas as LNG, which it uses for power generation in place of ageing nuclear capacity; it along with South Korea and Taiwan have well established LNG markets. China and more recently India have seen substantial increases in LNG demand in recent years. In 2020, the Ministry of Ecology in China moved to replace coal with gas for heating in seven million households. Demand in India is sensitive to LNG price; imports increased by 15 per cent in 2020 compared to 2019, reaching all-time highs in February as spot prices plummeted. In addition, there are several emerging LNG markets in Asia including Pakistan, Thailand, Kuwait and Singapore who are looking to LNG for stable supply as their economies grow.

Chart 1: Top 10 Global importers of LNG by volume, 2020

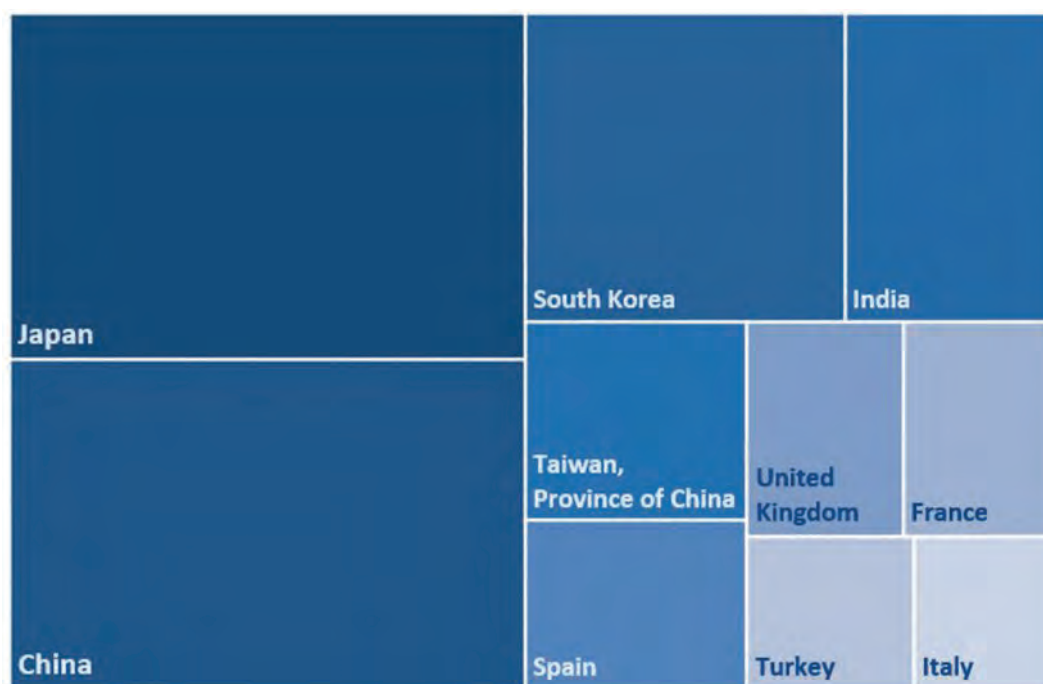
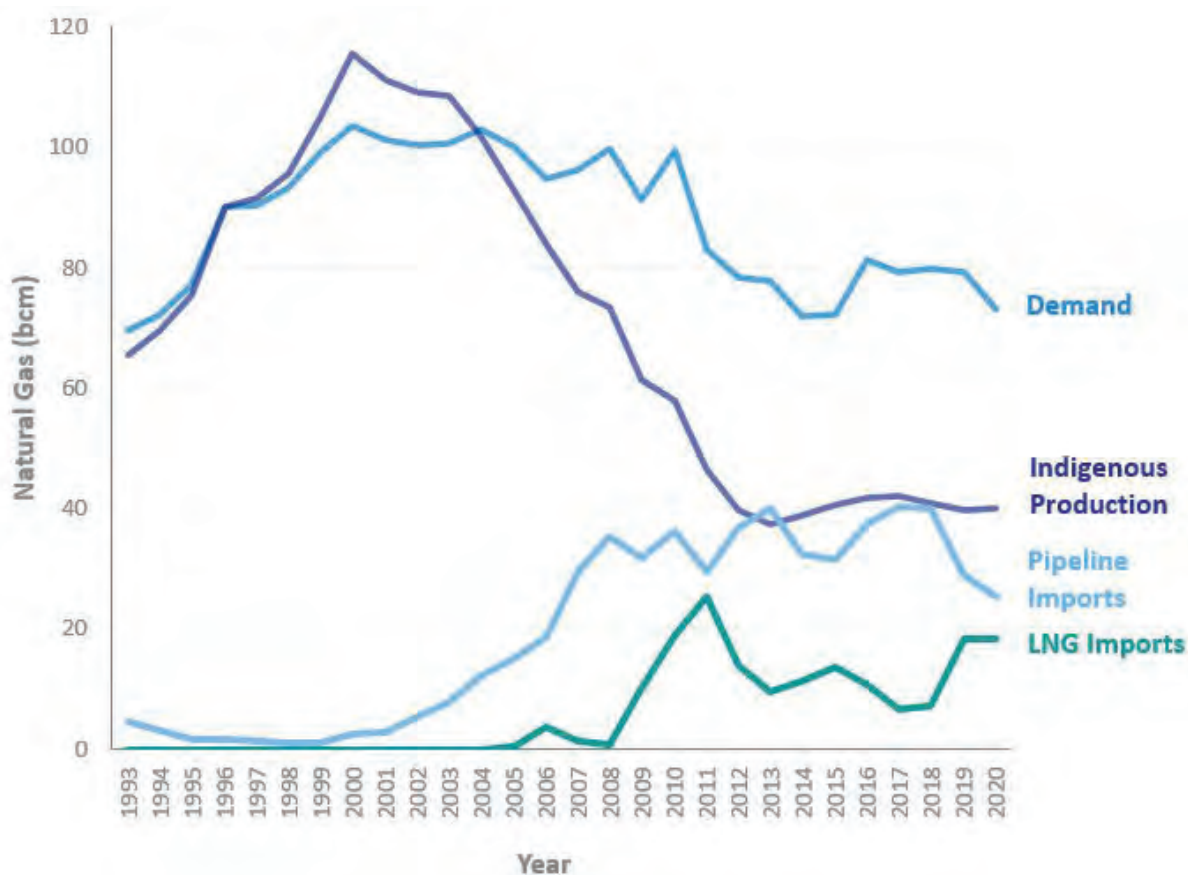


Chart 1 shows the top ten largest LNG importers globally. The UK is the second largest European importer of LNG behind Spain. Demand in Europe is substantially lower than in Asia. For context, in 2020 Turkey and the four largest European importers imported volumes equivalent to just over a quarter of that imported by the top five Asian importers.

However, Europe's substantial storage allows for imports when price is low, even during periods of low demand, meaning it can play a vital role in balancing the global LNG market; this was the case in 2019.

UK Gas Overview

Chart 2: Summary of UK Natural Gas Use, 1993 – 2020

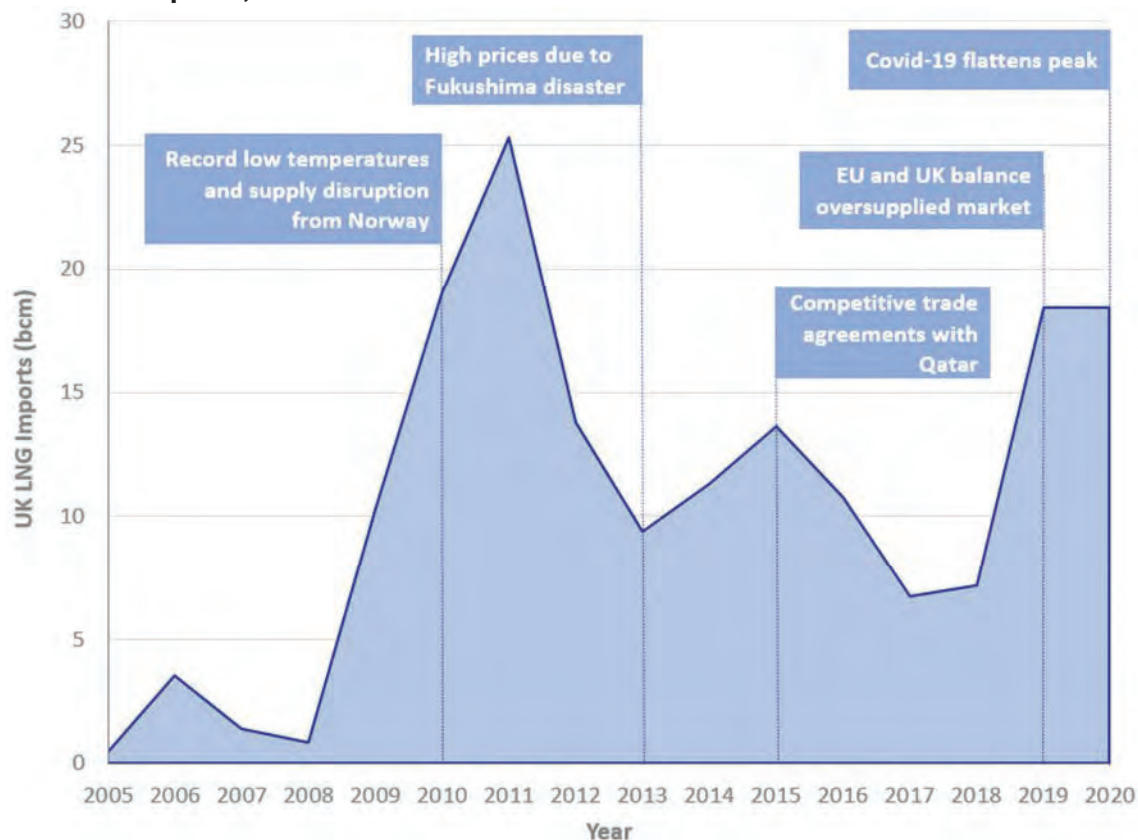


Indigenous production of natural gas from the UK Continental Shelf (UKCS) is transported via pipeline inland and to established trading partners. Chart 2 shows indigenous production exceeded demand between 1997 and 2003 when the UK was a net exporter of natural gas. Following this indigenous production declined before stabilising in 2013, at around a third of the 115 bcm peak in 2000. Since 2004 demand has also declined but at a slower rate than production. This meant that in 2020 indigenous production met just over half of demand. In 2020, UK demand for natural gas reduced by 7.7 per cent compared to 2019 as national restrictions were imposed to curb the Covid-19 pandemic.

As indigenous production declined, imports have increased to meet demand. The UK began importing LNG for commercial use in 2005. Imports of LNG were minimal until 2008 when they increased rapidly before peaking in 2011; since then, LNG imports have fluctuated. Historically natural gas imports by pipeline and of LNG have been negatively correlated meaning that as pipeline imports fall, imports of LNG increase, and vice versa. The UK continues to export some natural gas by pipeline; this tends to be seasonal. For example, exports to the Netherlands support a UK oversupply in summer months following the closure of storage facilities.

UK LNG Imports

Chart 3: UK LNG Imports, 2005 - 2020



2010-2011

Chart 3 shows that UK imports of LNG increased rapidly from 2008 peaking in 2011 at 25.3 billion cubic metres (bcm); accounting for 46 per cent of natural gas imports and 31 per cent of demand. This peak was the result of record low temperatures and disruption to pipeline supply due to industrial action in Norway. During the winter of 2010/11, on peak demand days, LNG was the second largest source of natural gas behind stock draws, making it more important than pipeline imports to meet demand.

2013

After the 2011 peak, LNG price increases saw a rapid decline in imports until 2013. These price increases were associated with the Tōhoku earthquake and tsunami in 2011 which caused the Fukushima disaster. In Asia, LNG was used as an emergency fuel to meet demand, as nuclear capacity was reduced over safety concerns. This led to the creation of an LNG spot market and subsequent changes to the global market structure.

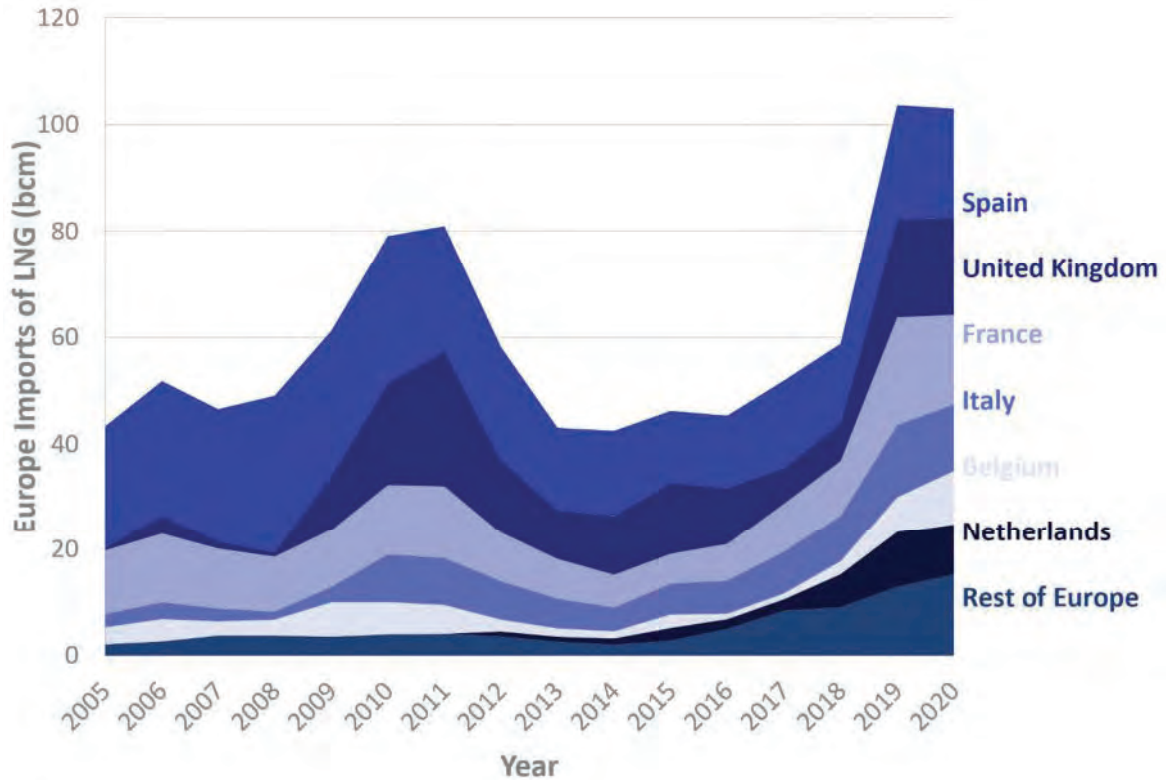
2014-2015

Following this, changes to UK LNG imports have been heavily influenced by markets. The 2014/15 bump in imports is linked to supply and purchase agreements (SPAs) with Qatar. These contractual agreements can be mutually beneficial, for example, Qatar Petroleum invested in UK LNG infrastructure including the South Hook LNG terminal, which in turn agreed to import Qatari LNG.

2019

In 2019, LNG imports peaked again at 18.5 bcm, just under three quarters of the peak in 2011. The UK played a key role in the European 'LNG sink', which saw steep increases in LNG imports across Europe to balance global LNG (Chart 4). This boom in imports was the result of an oversupplied market. Warm weather in Asia reduced demand whilst new projects in Qatar, the US and Russia increased supply. LNG spot price reached record lows and Europe played the role of the balancing market.

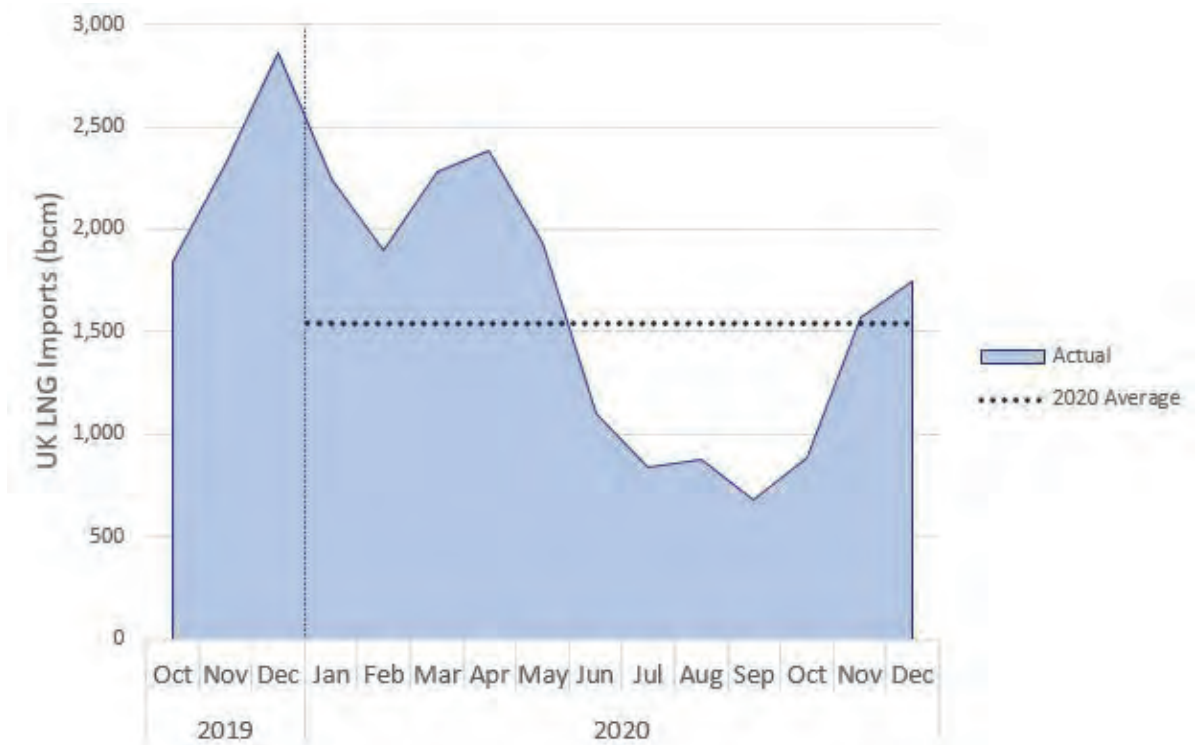
Chart 4: Europe LNG Imports, 2005 – 2020



2020

In 2020, the UK imported 18.4 bcm of LNG, accounting for 42 per cent of natural gas imports and 22 per cent of supply – maintaining the high levels seen in 2019. Chart 4 shows this trend was consistent for much of Europe. Chart 5 shows monthly imports unpacking hidden complexities within the 2020 figure.

Chart 5: UK LNG Monthly Imports, October 2019 - December 2020



In early 2020, Europe held high levels of gas in storage, due to stockpiling in late 2019 as a safety net during negotiations between Russia and Ukraine regarding a new transit deal. High storage levels combined with a mild winter saw a slump in imports from January.

Alongside this, in the first quarter of 2020 global lockdowns, to prevent the spread of Covid-19, began to reduce LNG demand, particularly in key Asian markets. This led to a decline in LNG prices which buyers in Europe took advantage of, sustaining high levels of imports in the first half of the year.

However, unlike in 2019, European gas inventory started the year at record high levels. In addition, restrictions to curb the Covid-19 pandemic continued into the summer exacerbating lower seasonal demand. This combination meant that maintaining high LNG imports was not sustainable and as such they began to fall over the summer.

Moving into winter, UK imports increased as temperature declined; meanwhile a cold Asian winter increased LNG demand, which combined with unanticipated supply outages led to the highest LNG spot price ever recorded, in January 2021.

UK LNG Import Sources

Chart 6: Top 6 2020 Import Sources as a percentage of total LNG imports, 2005 - 2020

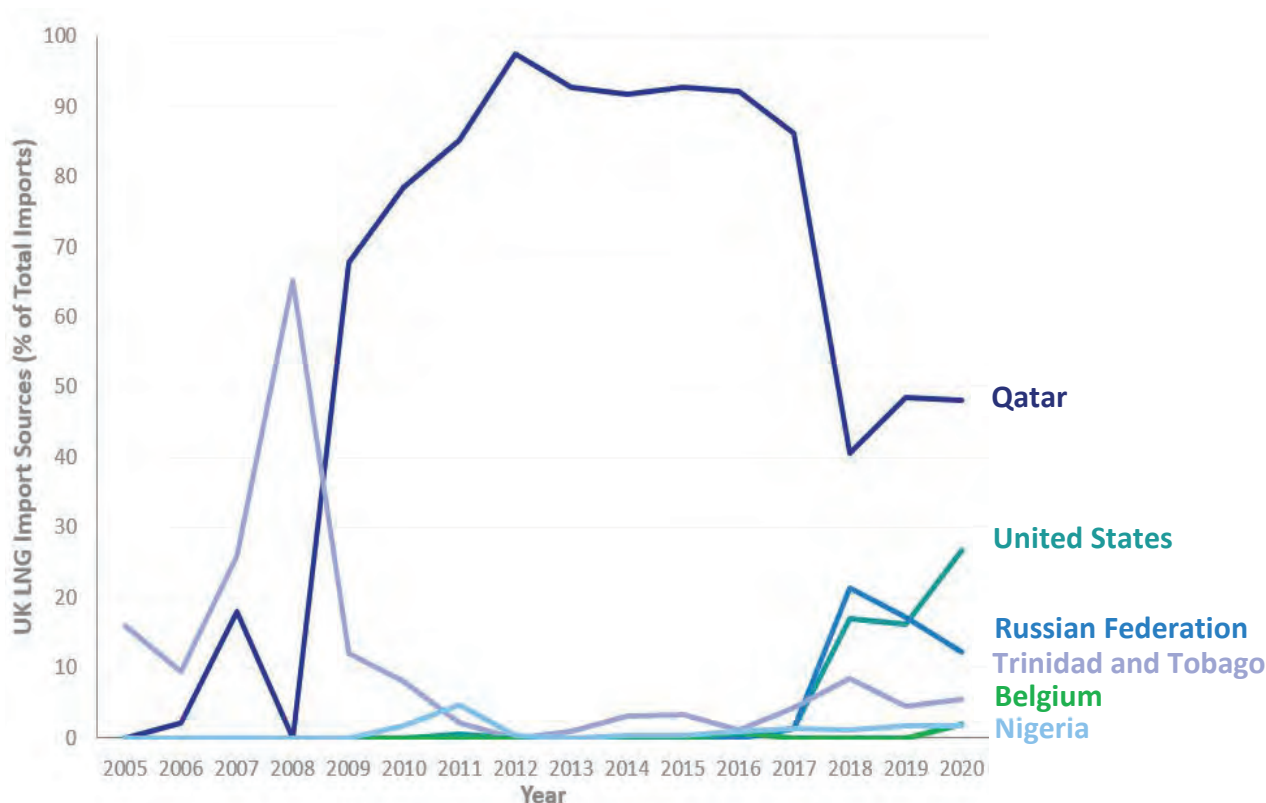


Chart 6 shows the top six sources of UK LNG imports as a percentage of total imports. A strong trading relationship with Qatar means that it remains the dominant source in 2020. However, the share of Qatari LNG has declined in recent years falling from 98 per cent in 2012 to just under half in 2020. This fall is in line with increases in global liquification capacity allowing for a diversification of import sources. For example, in 2005 the UK imported LNG from just two sources, Algeria and Trinidad and Tobago, this climbed to eight in 2011 and 10 in 2020. Notably, imports from the US increased by 64 per cent in 2020 compared to 2019. This was despite a complex year for US shale as several wells were forced to shut-in because of the Covid-19 pandemic, and as further environmental concerns were raised.

Summary

The UK uses natural gas from indigenous production and imports. Some of these imports arrive as LNG. The UK began importing LNG in 2005 with the peak in 2011 when LNG made up more than a quarter of total supply. Since 2011, import volumes have been related to economic factors. Asia is a major consumer of LNG hence Asian markets tend to influence European and UK imports.

UK LNG imports in 2020 were stable compared to 2019 when they substantially increased, as Europe balanced an oversupplied market. Moving into 2020, substantial levels of gas in European storage, followed by restrictions in response to the Covid-19 pandemic, muted potential growth for UK LNG imports. Total LNG imports made up 22 per cent of supply of gas to the UK in 2020 compared to 21 per cent in 2019, with Qatar as the primary source of supply followed by the US.

Major commentators are projecting continued growth of LNG markets despite setbacks in 2020 due to the Covid-19 pandemic, as established importers shift focus to reducing greenhouse gas emissions and as emerging economies seek secure energy supply.



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Capacity of UK electricity generation assets in the 21st century, 2000 to 2019

Key headlines:

- UK electricity generation capacity rose steadily over the last twenty years with total installed capacity above 100 GW since 2017, and up a third since the turn of the millennium.
- During this time, there was a dramatic shift in the capacity mix, particularly in the last decade. Fossil fuel fired capacity declined from its 71.0 GW peak in 2010, while renewable electricity generation capacity rose rapidly. In 2019, the capacity share of renewables exceeded that of fossil fuel fired plants for the first time, with renewable generators providing 47.1 GW, and fossil fuel generators providing 43.9 GW.
- Nuclear plant capacity declined gradually over the past twenty years, with no new capacity since Sizewell B was commissioned in 1995. The total capacity in 2019 was 9.2 GW, which was 26 per cent lower than 2000 levels, following the closure of the eight remaining Magnox reactors during this time.
- Fossil fuel fired capacity has been in decline since 2010, predominantly driven by the phasing out of coal plants since 2013, while gas generation capacity has remained relatively stable in this time. Coal generators, which dominated the capacity mix in the 20th century and provided over a third of capacity in 2000, provided only 6.8 per cent of capacity in 2019, with just four coal plants currently in active operation at the time of writing. Oil and dual fuelled stations have also largely fallen out of the capacity mix, providing a combined share of less than two per cent in 2019.
- Renewable installed capacity currently stands at just over 48 GW (according to provisional figures for 2020), which is just under half the UK total. This compares to 3.0 GW of renewable capacity in 2000 and is five times higher than the 2010 value of 9.3 GW. This expansion was supported by subsidy schemes including the Renewables Obligation (RO), Feed-in-Tariffs (FITs) and Contracts for Difference (CfD).
- The dominant renewable technology in terms of capacity is onshore wind, which provided 14.1 GW in 2019, compared to 13.3 GW of solar and 10.0 GW of offshore wind capacity. Bioenergy provided 7.8 GW in 2019, having risen sharply since 2013 following the conversion of coal units to biomass at Drax and Lynemouth.

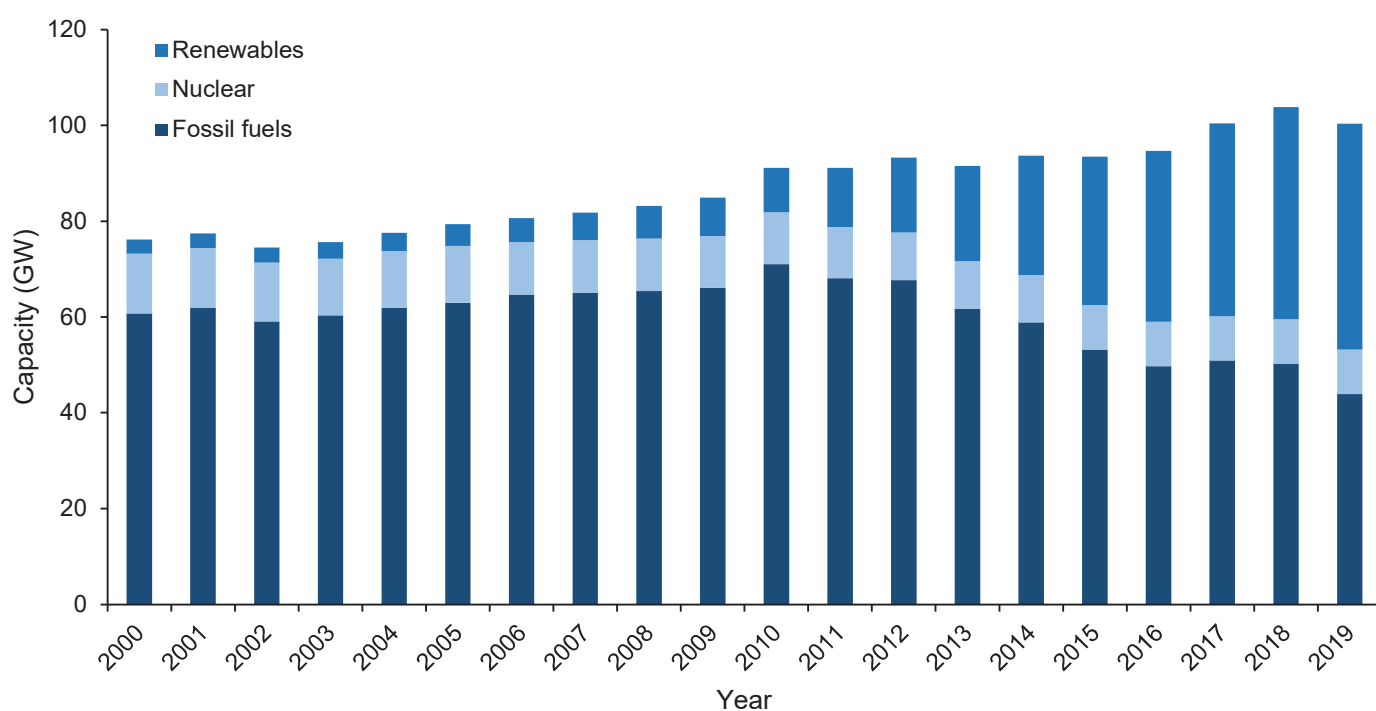
Introduction

This article examines changes and trends in the capacity of UK electricity generation assets in the period 2000 to 2019. In particular, the article draws attention to dramatic changes to capacity by fuel and technology, which drove changes in the generation mix. The data in this article are taken from chapters 5 and 6 of the [Digest of United Kingdom Energy Statistics \(DUKES\) 2020](#); the definitions are thus identical to those in DUKES. Note that fossil fuel-fired capacity totals in this article include coal, oil, mixed and dual fuelled conventional steam stations, combined cycle gas turbine (CCGT) stations, gas turbines and oil engines and combined heat and power plants (electrical capacity only) as listed in DUKES table 5.7. Renewable electricity generation capacity includes hydroelectric (natural flow) stations, wind, solar, shoreline wave, tidal, bioenergy and waste as defined in DUKES table 6.4.

UK electricity generation capacity

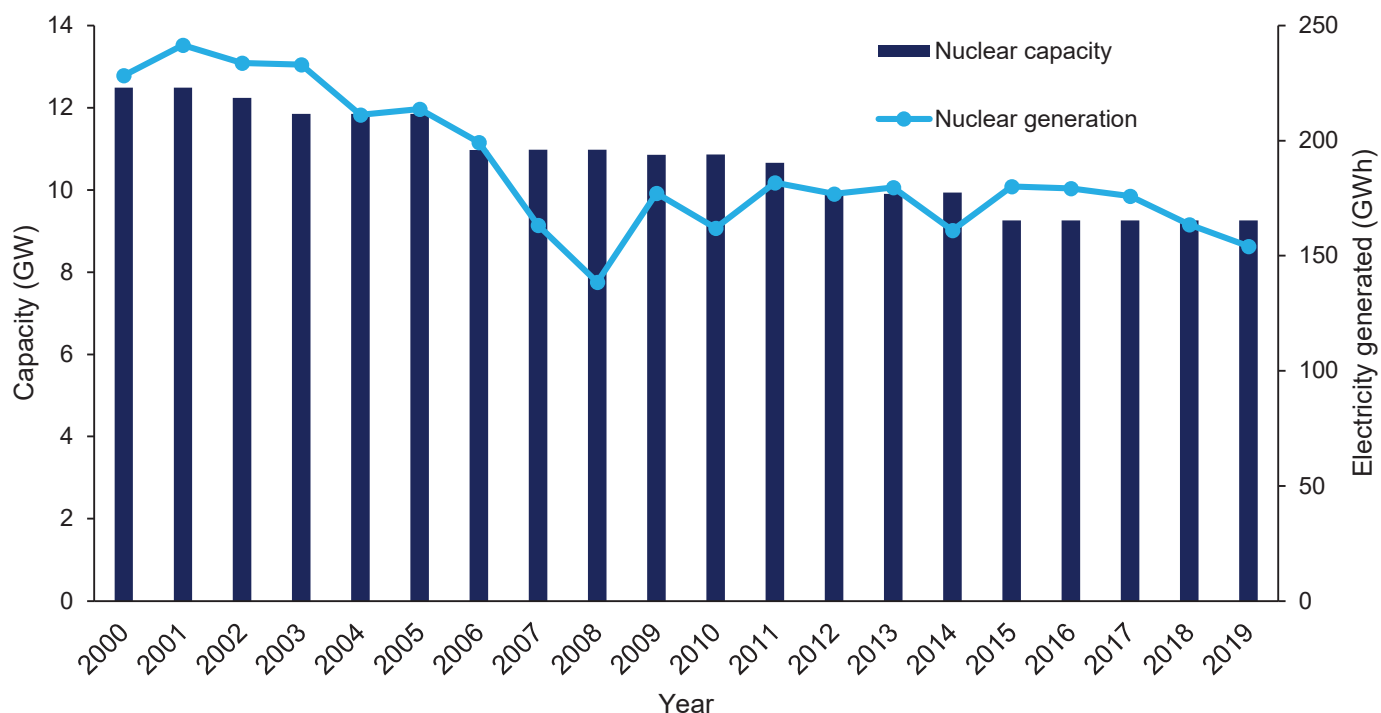
Since the beginning of the 21st century, total installed capacity of UK electricity generation assets has risen steadily, with a dramatic shift in the capacity mix resulting from the emergence of renewable technologies. Chart 1 presents electricity generation capacity in the UK by technology. In 2000, 80 per cent of installed capacity was from fossil fuel fired generators, a proportion which remained relatively stable until 2010, since when it has fallen year on year. The total capacity of all generators increased year on year from 2003 to 2012, primarily driven by the increasing capacity of gas generators, while renewable capacity only grew slowly over this time. Total fossil fuel capacity reached a peak of 71.0 GW in 2010, 17 per cent higher than in 2000, but has fallen steadily since. Renewable generators became significantly more abundant in the 2010s, particularly because of the rapid expansion of wind and solar generation assets. In 2010, the renewable capacity comprised one tenth of the total for the first time and the following year exceeded the share of capacity provided by nuclear. In the years following, renewable capacity rose sharply, increasing by a factor of five in the last decade. In 2019, renewable generators provided 47 GW of capacity which, at 47.0 per cent of total capacity, exceeded the share provided by fossil fuel generators for the first time.

Chart 1: Installed capacity of UK electricity generation assets by technology, 2000 to 2019.



Nuclear capacity has also fallen since 2000, but at a slower rate than fossil fuel capacity (see Chart 2). The last new nuclear power station, Sizewell B, was commissioned in 1995 at which time the nuclear capacity was 12.9 GW, about a fifth of the total UK capacity. In the years that have followed, all eight remaining Magnox reactors closed, including Wylfa in 2015, which was the last Welsh nuclear power station. There are currently 14 active Advanced Gas-cooled Reactors (AGRs) at seven plants and one Pressurised Water Reactor (PWR). Total nuclear capacity in 2019 was 9.2 GW, 26 per cent lower than 2000 levels. Apart from Sizewell B, the seven other active plants are scheduled to close by 2035, although 3.2 GW of this capacity will be offset by the commission of Hinkley Point C, which is currently under construction and expected to generate electricity for the first time in the mid-2020s. The UK's ageing nuclear power stations saw the decline of nuclear generation over the past two decades due to prolonged maintenance outages. This reduced operational nuclear capacity. In 2007 and 2008, nuclear generation fell sharply, which was particularly the result of maintenance at Hinkley Point B and Hunterston B which restricted operations. In 2019, nuclear generation was at the lowest value since 2008 due to long-term maintenance outages.

Chart 2: Nuclear electricity generation and capacity in the UK, 2000 to 2019.

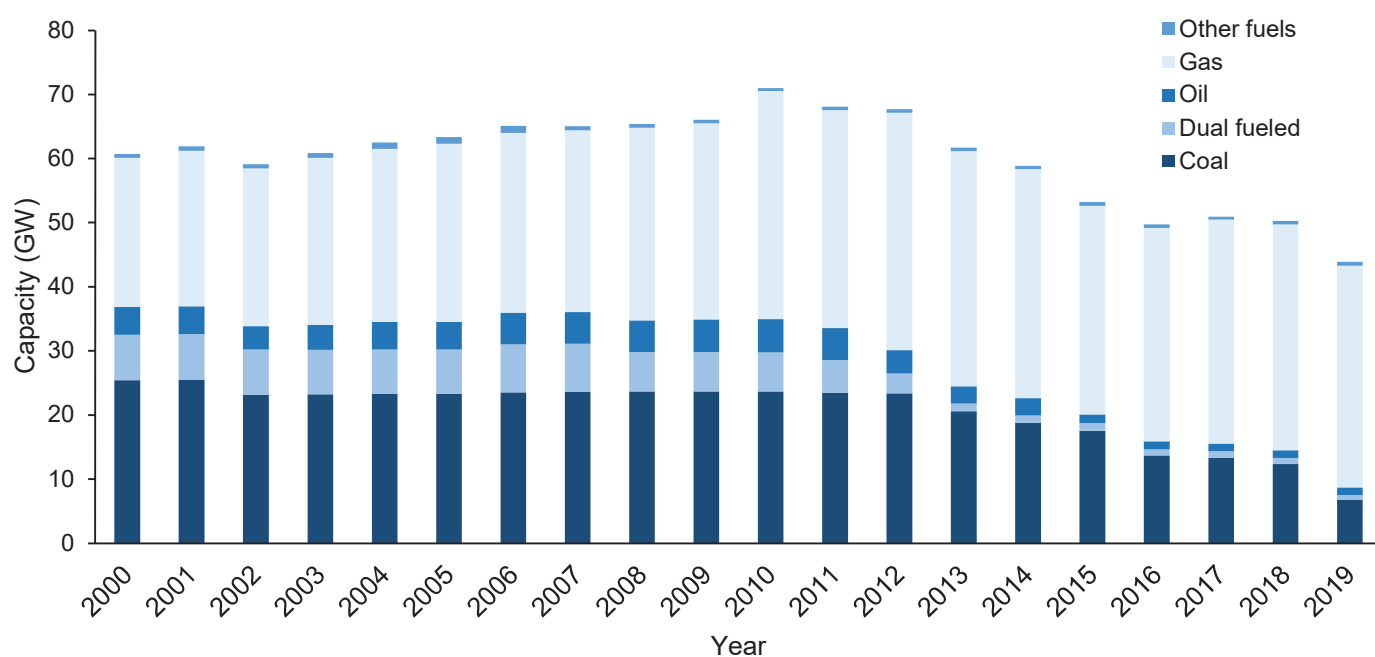


Fossil fuel-fired capacity

Within fossil fuel capacity, there has also been a significant shift in capacity by fuel. At the beginning of the 21st century, coal-fired capacity was just over 25 GW, with gas-fired capacity standing at 23 GW. Throughout the next decade, gas-fired capacity rose steadily to a peak of 37 GW in 2012, but coal-fired capacity remained relatively stable until the UK Government introduced the Carbon Price Floor (CPF) in April 2013. This increased the cost of coal-fired generation relative to gas and, along with the impact of EU regulations, led to the closure of almost all the UK's coal and oil plants, resulting in the swift decline of coal and oil generation capacities. Dual fuelled plants' capacity followed a similar trend to that of coal and oil since the majority of these stations have both coal and oil-firing capabilities. Whilst fossil fuel capacity declined overall in the last decade, gas-fired capacity remained relatively stable, fluctuating around the 35 GW mark. This is largely because of the rapid decline in coal capacity, which resulted in gas generators being required to meet the demand. The expansion of renewable technologies in recent years rendered gas generators less dominant in both the capacity and generation mixes, although they still provide more electricity and have a higher generating capacity than any other fuel. Gas generators provided 34.5 per cent of capacity in 2019, down from a peak of over two fifths of the total in 2013. Coal generators, which dominated the capacity mix in the 20th century and provided over one third of capacity in 2000, provided only 6.8 per cent of capacity in 2019. Oil and dual fuelled stations have also largely fallen out of the capacity mix, providing a total capacity of less than 2 per cent in 2019.

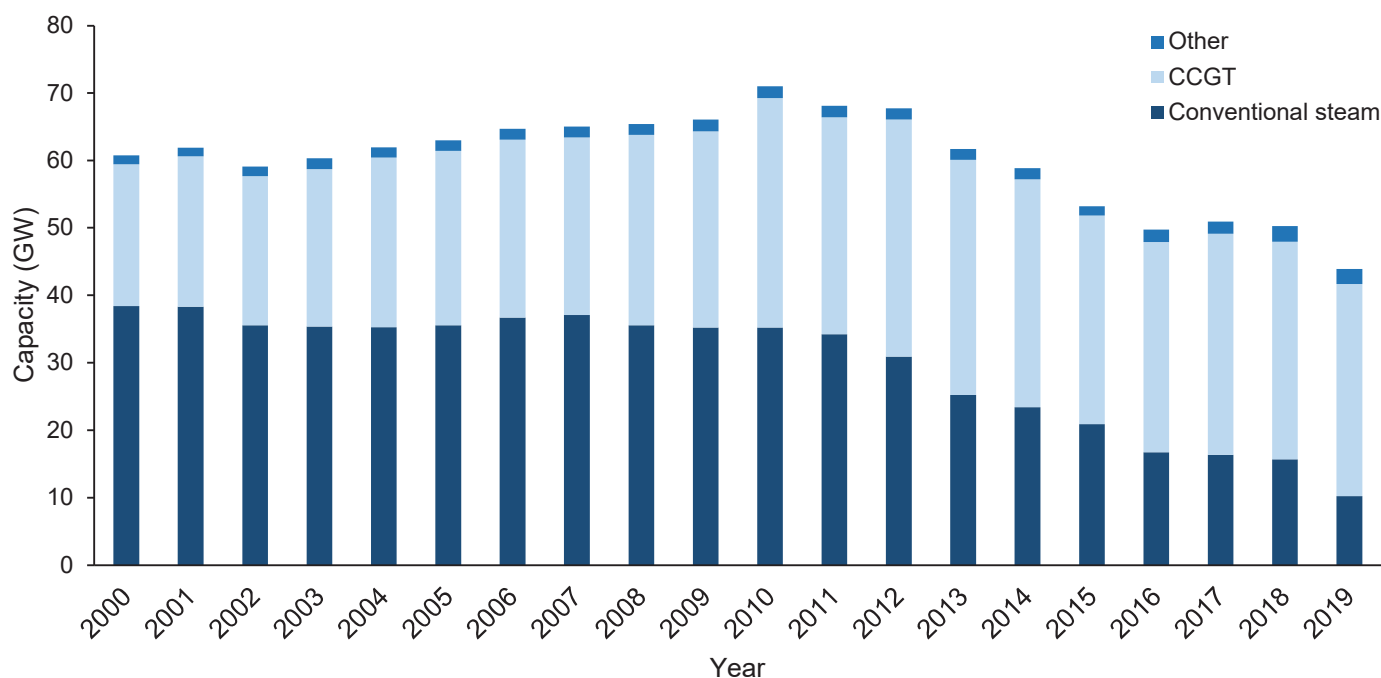
In 2019, coal capacity fell by a further 5.5 GW following the closures of Cottam, Aberthaw B and Eggborough. This was depleted further following the closure of Fiddlers Ferry in 2020. At the time of writing, just four coal plants remain in the UK. The three coal-only plants have a combined capacity of 5.3 GW, while Kilroot, which is a mainly coal-fired station with oil-firing capabilities, has a capacity of 0.6 GW. The UK's remaining coal plants are expected to be phased out by October 2024 as the UK works towards net zero carbon emissions by 2050. Drax will close its remaining coal units in 2021, whilst Kilroot plans to convert to gas by winter 2023. Plans for the closure of Ratcliffe and West Burton are yet to be finalised.

Chart 3: Installed capacity of fossil fuel-fired plants in the UK by fuel, 2000 to 2019.



These trends are mirrored in the installed capacity of different types of fossil fuel-fired plant over the time series. Chart 4 shows how installed capacity of different types of plant has varied over time based on the capacity figures by plant type published in DUKES table 5.7. The changes in gas generation capacity closely align with those for Closed-Cycle Gas Turbine (CCGT) stations, since the majority of gas generation capacity is from CCGT plants. Conventional steam plant capacity closely mirrors that of coal, since the majority of conventional steam stations are coal-fired, or dual-fueled using mainly coal. In the past decade, conventional steam capacity has declined rapidly, following the winding down of coal and oil. Since the closure of Littlebrook D in March 2015, there have been no oil-fired conventional steam stations in the UK. It should be noted that conventional steam capacity in chart 4, as in DUKES 5.7, does not include bioenergy-fired conventional steam plants, for which capacity has increased in recent years following the conversion of coal plants to biomass firing capabilities at Lynemouth and Drax.

Chart 4: Installed capacity of fossil fuel-fired plants by type, 2000 to 2019.



Renewable technologies

The capacity of renewable technologies has expanded dramatically since the turn of the millennium, with both technological developments and streams of funding to endorse renewable electricity generation resulting in an upsurge in the number of renewable generators across the UK. Until 2005, renewable capacity made up less than 5 per cent of the total UK capacity, with most of this from hydro (natural flow) and bioenergy generators. The Renewables Obligation (RO) was introduced in 2002 to support large-scale renewable projects and helped instigate more widespread development of wind and solar farms across the UK. As a result, onshore and offshore wind capacity rose steadily in the 2000s, before starting to rise more rapidly towards the end of the decade. Most currently operational large-scale projects are supported by the RO, which closed to new capacity in March 2017, subject to a grace period.

Solar generation capacity rose sharply following the introduction of the Feed-in-Tariffs (FIT) scheme in 2010, which primarily supported small-scale generators with a capacity up to 5 MW. In 2010, less than 100 MW of capacity was from solar generators, less than 0.1 per cent of the UK capacity mix. However, by 2015 solar generators provided one tenth of the total for the first time, with solar capacity increasing over 100 times in five years to 9.5 GW. In the same year, onshore wind also exceeded a tenth of capacity with the capacity of renewable technologies providing a third of the total for the first time. Since the RO closed in 2017, the expansion of solar and onshore wind generation capacity has slowed with the number of new small-scale generators also falling due to the adjustment of the FIT scheme. The scheme finally closed to new capacity in March 2019, subject to a grace period and some time-limited extensions.

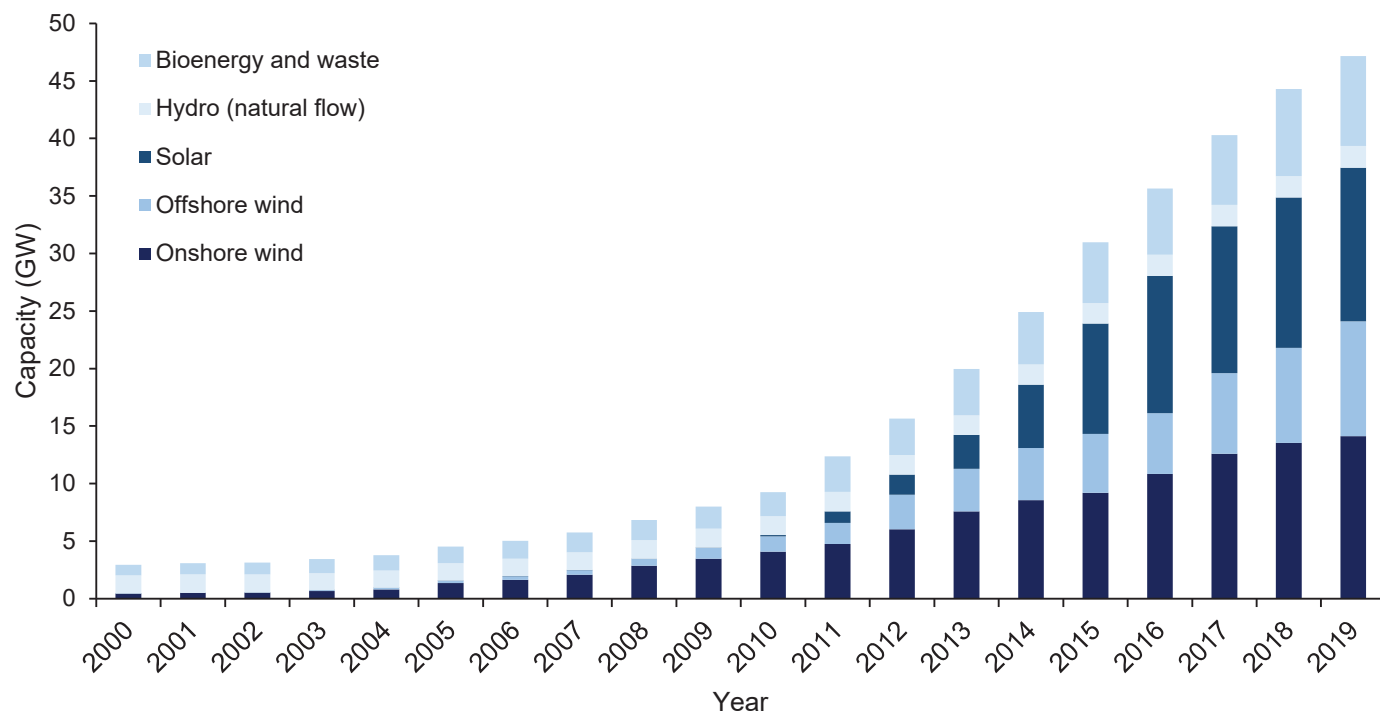
As coal plants closed in the UK, several large coal units were converted for biomass generation capabilities. Lynemouth's 420 MW coal unit was converted to biomass in 2018, while Drax, which is now the UK's largest bioenergy generator, has converted four of its coal units to biomass since 2013, which have a combined capacity of 2.6 GW. In 2019, these two sites constituted the overwhelming majority of the UK's plant biomass capacity which totals 4.5 GW, and a substantial part of the 7.8 GW of bioenergy and waste capacity.

The Contracts for Difference (CfD) scheme is now the government's main mechanism for supporting the development of renewable technologies. There have been three contract allocating rounds since 2014, with a fourth due to take place in 2021. Initial projects supported by the CfD scheme were first commissioned in around 2019, with CfD notably providing support to large offshore wind farms including Hornsea One and East Anglia One. The first phase of the 1.2 GW Hornsea One project came online in 2019, with the 0.7 GW East Anglia One project becoming fully operational in 2020. Following this, offshore wind generators provided over 10 GW of capacity in 2020. With the continuing upsurge in renewable generation capacity and the decline of fossil fuels, renewable technologies provided 47.0 per cent of capacity in 2019, exceeding the fossil fuel capacity share for the first time. The dominant renewable technology in terms of generation capacity is currently onshore wind, which provided 14.1 GW in 2019, which solar generators providing 13.3 GW.

As a particular result of the continued expansion of offshore wind, 2020 renewable capacity now stands at just over 48 GW, which is just under half the UK's total installed capacity. Provisional figures also indicate that renewable electricity generation in the UK exceeded that of fossil fuels for the first time in history in 2020.

Chart 5 illustrates the growth of installed capacity of different renewable technologies over the last twenty years. Note that in this chart, a very small amount of shoreline wave and tidal capacity is included in offshore wind.

Chart 5: Installed capacity of renewable generation assets, by technology, 2000 to 2019.



Derated renewable generation capacity

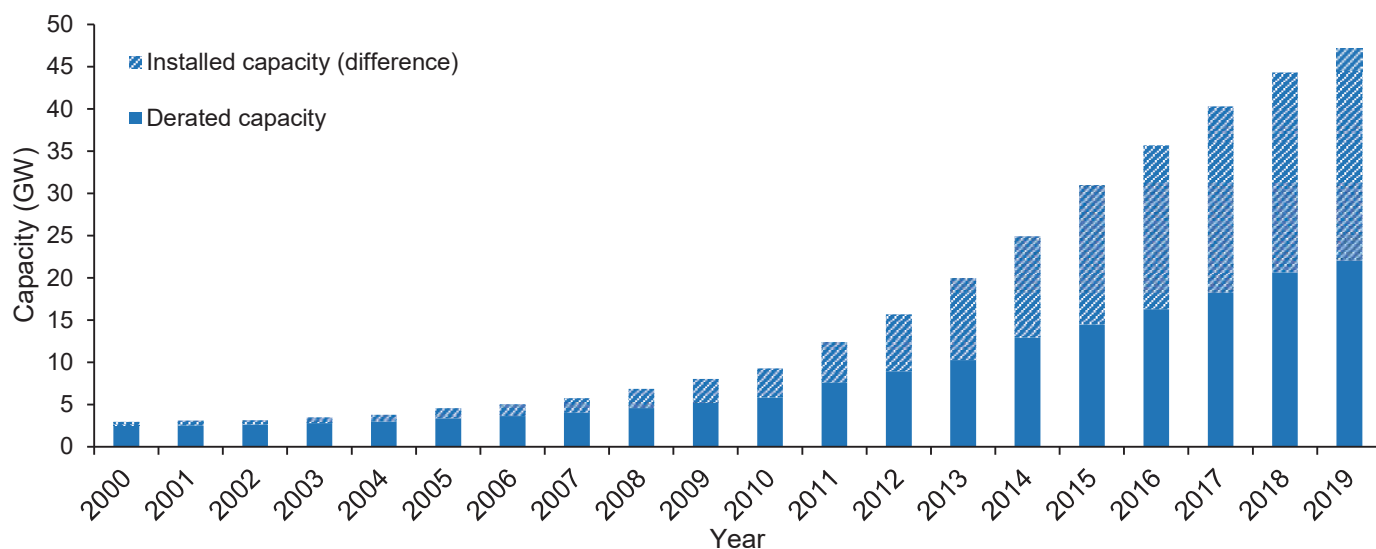
In charts 1 and 5, the electricity generation capacity of renewable technologies is shown on an installed capacity basis. Renewable generation capacity can also be represented on a derated basis which considers the intermittency of different renewable technologies, allowing for a more direct comparison with other technologies. The derated capacity is calculated by applying a scale factor to the installed capacity which accounts for the variability of the energy source (see Table 1).

Table 1: Scaling factors for calculating the derated capacity of renewable energy generation sources.

| Technology | Scale factor |
|--|--------------|
| Wind | 0.430 |
| Solar photovoltaics | 0.170 |
| Small-scale hydro plants (capacity up to 5 MW) | 0.365 |

Electricity generation in wind, solar and hydro stations is dependent on weather conditions, namely wind speeds, sun hours and rainfall respectively. The operational capacity of thermal renewable (bioenergy and waste) sources does not vary with weather conditions, whilst large-scale hydro stations are less dependent on rainfall. De-rated capacity is a useful metric for monitoring the capacity required to meet demand, since more intermittent renewable technologies cannot be relied upon to consistently generate electricity at their installed or ‘nameplate’ capacities. DUKES Chapter 6 provides load factors for renewable electricity generation for different technologies. These represent the amount of electricity generated as a percentage of the maximum load. Chart 6 shows how derated capacity has varied over time, alongside changes in renewable installed capacity.

Chart 6: Electricity generation capacity of UK renewable assets derated for intermittency, 2000 to 2019.



The future of electricity generation capacity in the UK

The capacity mix is certain to continue to change in the coming years, as the UK seeks to achieve its goal of net zero carbon emissions by 2050. The complete phase out of coal generation is expected by 2024, while all nuclear plants except Sizewell B and Hinkley Point C (which will begin generating in the mid-2020s) expected to cease operations by 2030. BEIS modelling suggests that overall demand for electricity could double by 2050, driven by a shift to electric vehicles and electricity replacing gas for heating. Generation capacity will therefore have to increase significantly in order to replace retiring capacity and keep pace with demand.

The government has set a target of having 40 GW of offshore wind capacity by 2030, with several onshore and offshore wind sites currently under construction and expected to become operational by 2023. A further 5.8 GW of remote island onshore wind and offshore wind capacity gained funding in the third CfD allocation round, with this expected to become operational by 2025. A further 12 GW of renewable capacity is aimed to be allocated in the fourth CfD allocation round, taking place in late 2021.

Hinkley Point C, which was the first nuclear power plant to begin construction in the UK in over 20 years is due to commission in the mid-2020s, with its two European Pressurised Reactors (EPRs) providing a combined 3.2 GW of capacity. With the existing nuclear fleet largely retiring over the next decade, the construction of two more EPRs at Sizewell C have been proposed by EDF Energy. The government will also provide funds for the development of Small Modular Reactors (SMRs) and Advanced Modular Reactors (AMRs), which aim to provide cost-competitive nuclear power by the early-2030s.

Fossil fuel fired generation is not expected to end completely, with ambitions for the deployment of power carbon capture, usage and storage (CCUS). The first gas-fired CCUS station is expected to be operational by 2030 for the generation of low carbon electricity.

Further information on the future of electricity generation in the UK can be found in the UK Energy White Paper, published in December 2020, which includes illustrative scenarios of how the electricity generation mix could look in 2050, based on BEIS modelling.

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Data for this article

The data used to produce this article can be found in the Digest of UK Energy Statistics (DUKES) chapters 5 and 6, as well as Energy Trends chapters 5 and 6 (see references below).

References

Digest of UK Energy Statistics 2020 (DUKES) – Electricity (Chapter 5):

<https://www.gov.uk/government/statistics/electricity-chapter-5-digest-of-united-kingdom-energy-statistics-dukes>

Digest of UK Energy Statistics 2020 (DUKES) – Renewables (Chapter 6):

<https://www.gov.uk/government/statistics/electricity-chapter-6-digest-of-united-kingdom-energy-statistics-dukes>

Electricity generation and supply article and accompanying data for Scotland, Wales, Northern Ireland and England, 2016 to 2019:

<https://www.gov.uk/government/publications/energy-trends-december-2020-special-feature-articles>

UK electricity generation and consumption (Energy Trends 5.1 to 5.6):

<https://www.gov.uk/government/statistics/electricity-section-5-energy-trends>

Renewable electricity generation and capacity (Energy Trends 6.1):

<https://www.gov.uk/government/statistics/energy-trends-section-6-renewables>

Energy Trends: weather

<http://www.gov.uk/government/statistics/energy-trends-section-7-weather>

Energy White Paper: Powering our net zero future

<https://www.gov.uk/government/publications/energy-white-paper-powering-our-net-zero-future>



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Domestic wood consumption revised baseline

Key headlines

In December 2020, The Department for the Environment, Food, and Rural Affairs (Defra) published the results of research conducted by Kantar Public to understand people's domestic burning behaviours including an estimate of wood fuel consumption for the residential sector. As part of the publication a summary report compared the results of the Kantar survey data for 2018-19 with consumption published in The Digest of UK Energy Statistics (DUKES) for 2018. It is now proposed that this new estimate is incorporated into the DUKES energy balances. This will result in a downward revision, provisionally estimated to be by 1.5 mtoe, from 2.2 mtoe to 0.7 mtoe.

Introduction

The most recent review of the baseline for domestic wood consumption was in 2014 in response to a paper by The Concerted Action on the Renewable Energy Directive (CA-RES¹) recommending a large-scale survey to address suspected weaknesses in existing baselines for EU member states. The paper acknowledged the challenges in obtaining reliable estimates particularly for countries with low wood use such as the United Kingdom. The department for Business Energy and Industrial Strategy (BEIS, Department of Energy and Climate Change at the time) commissioned a survey to address this and the results can be viewed via the following link:

<https://www.gov.uk/government/publications/summary-results-of-the-domestic-wood-use-survey>

This survey focussed solely on burning wood fuels indoors and specifically excluded outdoor burning as this is not a requirement for DUKES energy balances. The scope of Defra's survey, 'Burning in UK Homes & Gardens', published in December 2020, was wider and included outdoor burning and other non-wood fuels, as the policy context was to improve the evidence base on the overall contribution of domestic combustion to air pollution, particularly fine particulate matter (PM_{2.5}) which can have an impact on human health and the environment. The research was not only quantitative but also included qualitative research to assess individuals' practices and attitudes to burning fuels

The full results of Defra's survey can be found via the following link;

<http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=20159&FromSearch=Y&Publisher=1&SearchText=AQ1017&SortString=ProjectCode&SortOrder=Asc&Paging=10#Description>

Annex A of the results, 'UK domestic solid fuels use estimates paper', discusses several reasons why the results may have differed so significantly. These are summarised in the following paragraphs.

Difference in methodologies

There are two established approaches to estimating wood fuel consumption;

1. Hours of operation; this takes the number of hours a respondent has said they used their appliance and an energy value is calculated using typical fuel input for a particular type of appliance.
2. Quantity estimates; an energy value is calculated using the weight or volume of wood fuel and uses assumptions for wood fuel properties such as calorific values and moisture content.

¹https://ec.europa.eu/eurostat/documents/38154/4956233/Quality_standard_statistics_wood_fuel_consumption_households_CA-RES_2012.pdf/52593e32-cb01-0fc9-0d19-33e03c0d6ad0?t=1607942361438

Each approach has its drawbacks but stakeholder views from both surveys confirmed that the hours of operation is more reliable as there are fewer assumptions to consider. Despite this both the BEIS and Defra surveys included questions to enable either methodology to be used.

Where the BEIS and Defra approaches differed, is that BEIS used the first methodology only. As this survey asked questions only relating to wood fuel, it was assumed that all fuel was wood. Defra on the other hand were interested in other fuels such as coal so used a hybrid methodology whereby the first methodology was used to produce an energy value for each respondent. This was then apportioned to the energy values of each fuel calculated from the second methodology.

Table 1 Comparison of key assumptions and variables;

| Key variable comparisons | BEIS 2018 ¹ | Defra 2018-19 | Source of Defra figure ² |
|---|------------------------|-------------------|-------------------------------------|
| Proportion of households burned in previous year | 7.5% | 6.9% | Section 4.1.1 Annex A |
| Proportion of households burned in previous week | - | Min 1%, max 6.5 % | Section 4.1.1 Annex A |
| Average hours of operation; | | | Table 8, Annex A |
| Spring | - | 15.1 | |
| Summer | 10.0 | 8.7 | |
| Autumn | - | 20.8 | |
| Winter | 22.0 | 27.9 | |
| Proportion of fuel type | | | Table 7 Annex A |
| Wood fuel | 100% | 52% | |
| Coal | - | 47% | |
| Other | - | 1% | |
| Appliance proportions | | | Table 10 Annex A |
| Open Fire | 45% | 32% | |
| Closed Stove | 52% | 60% | |
| Pellet stove | 0.5% | - | |
| Manual boiler | 0.4% | - | |
| Range cooker | 1.3% | - | |
| Other | 0.8% | 8% | |
| Fuel use assumptions (kWh/h) | | | Table 10 Annex A |
| Open Fire | 17.6 | 17.6 | |
| Closed Stove | 9.2 | 9.2 | |
| Pellet stove | 7.5 | - | |
| Manual boiler | 20.0 | - | |
| Automatic boiler | 37.5 | - | |
| Range cooker | 8.9 | - | |
| Other | | 18.5 | |
| Total consumption (mtoe) | 2.2 | 0.7 | |

Both surveys used the same typical fuel consumption assumptions for open fires and stoves, differing only for more niche appliances which were so few, this would not have had a material impact on the final results.

The average hours of operation were not directly comparable as BEIS' survey took a two-season approach compared to Defra's four seasons. However, as they appear to be sufficiently similar it is unlikely that that this would have accounted for much of the difference.

¹ Although BEIS survey covered the year 2014, the value for 2018 is shown as the most relevant period for comparison with Defra's 2018-19 period.

² Data relating to the BEIS survey can be found in the publication tables; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/576953/Summary_Tables_Domestic_Wood_Survey.xlsx

Number of wood fuel burners

Although the proportion of households who had burned wood fuel in the previous year (6.9 per cent) was similar to that reported in BEIS' survey (7.5 per cent), on a week-by-week basis, the proportion was considerably lower, inferring that respondents were not consuming wood fuel on a regular basis and was as low as 1 per cent over the summer months (section 4.1.1 of Annex A). BEIS' survey was conducted as a one off, asking respondents to refer to just two historic seasons so it is possible that the average hours reported related to just those weeks they had burned, not accounting for periods when they did not burn anything. In contrast, the Defra survey asked respondents had they burned any fuel in the previous week, ensuring non-burning weeks were captured. It is likely that this is the main cause of difference between the two sets of results.

Alternative fuels burned

Although BEIS' survey asked respondents had they burned other fuels, this was framed as additional information and the key survey questions related to just wood fuel. The calculations were thus based solely on the hours of operation in conjunction with appliance assumptions. It is possible that respondents did in fact burn other fuel types during those hours reported. In contrast, the Defra survey used both the hours of operation but then allocated to fuel types gathered from the quantity questions. This resulted in a significant amount of coal being assigned to both open fires and wood stoves; Table 7 in Annex A (of the Defra publication) showed that just over half (52 per cent) of heat generated by all appliances was allocated to wood fuel with the remainder being from coal (47 per cent) and 'other' fuels (1 per cent).

Summary

Obtaining accurate estimates for heat generated by wood fuel in domestic appliances is challenging, given the difficulty in independently estimating supply of a fuel with both formal supply channels but also informal channels from waste and gathered wood, and although it is considered that user surveys will produce the best estimates it remains an imperfect methodology. By asking respondents to recall their burning habits in the previous week, the Defra survey will no doubt have improved accuracy compared to the BEIS survey which relied on respondents recalling their behaviour up to a year previously. However, there are still some areas for consideration such as the high proportion of coal being burned on indoor appliances, particularly as the share of stoves has increased since the BEIS survey was undertaken (from 52 per cent to 60 per cent). Although anecdotal evidence suggests few indoor burners burn coal on stoves, the results from Defra's research shows that this may be more prevalent than originally thought.

The Defra-funded survey covered the period April 2018 to March 2019 and BEIS intends to adjust this using a methodology based on heating degree days³ to obtain a calendar year estimate for 2018 to incorporate into its baseline. The impact of this adjustment is unlikely to materially affect the estimated downward revision (from 2.2 mtoe to 0.7 mtoe). The final figure will be published in DUKES 2021 (to be published in July 2021). Any user feedback will be welcomed and can be submitted via the following email address; renewablesstatistics@beis.gov.uk.

³ Heating degree day statistics can be found via the following link; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/963776/ET_7.1_FEB_21.xls



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Upcoming developments in dissemination of Energy Trends and the Digest of UK Energy Statistics

Key headline

This article sets out recent changes in our monthly and quarterly publications on energy production and consumption and sets out a future direction of travel for our annual publications and the way in which we aim to offer data to users in the future. We welcome views on this outline.

Recent changes to Energy Trends

Since the end of 2020 we have taken the opportunity presented by the [Web Content Accessibility Regulations](#) to revisit and revise our [Energy Trends Publication](#). The main changes are:

- We have improved accessibility of documents and spreadsheets in line with the legislation, for example providing alt text commentary, improving the clarity of the text and footnoting, and providing ODS copies of the data to sit alongside the XLS versions.
- For the document itself, we have consciously targeted it towards [inquiring citizens](#). The document is shorter and covers the principal developments over the last quarter rather than providing a fully comprehensive account of production and consumption. The chapter is a high-level summary that will vary in length each edition depending on the key stories.
- Other [user personas](#) are served by access to the underlying data, in both ODS and XLS formats.

We will continue to use the quarterly versions of Energy Trends as a vehicle for both consultation and dissemination of topical issues.

Upcoming developments for the Digest of UK Energy Statistics (DUKES)

We intend to update DUKES in line with the changes to Energy Trends. In particular:

- Simplify and improve the clarity of the text to make the document of greater value to the inquiring citizen persona. This will include moving significant parts of the methodology notes to a separate methodology document along with a focus on the key stories over the last year.
- Improve how easy our spreadsheets are to read by revising formatting and footnotes.
- Provide ODS data for the key chapter outputs alongside XLS outputs
- Continue to review our outputs to ensure continued compliance with legislation.

Longer term direction of travel

Whilst the guiding principle of the main written documents for dissemination (Energy Trends and DUKES) will be to make them short, clear, and aimed at inquiring citizens we are keen to develop our offerings to other users who need and want better access to the underlying data.

We would welcome views on **what** is made available and **how** it is made available.

In terms of the **'what'**, our initial thoughts are to prioritise changes to the presentation of data in the order shown below:

1. Key commodity balances in DUKES, then
2. Key monthly series from Energy Trends, then
3. Key quarterly data from Energy Trends, then
4. Supplementary tables within DUKES (e.g. lists of power stations, interconnector capacities and other annex data).

In terms of the **'how'**, we are at a very early stage and would welcome comments from users on how we might make data available other than via the XLS and ODS spreadsheets that we currently employ.

These developments are aspirational, and tools will be built organically as and when resource allows. Future developments will follow user feedback and engagement with documents and tools that we make available (e.g., through monitoring of application use and webpage hit counts).

User consultation

Should you have any questions or feedback on the recent changes or proposed developments, please do get in touch. You can contact us at energy.stats@beis.gov.uk



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APPENDIX 3: EXAMINING AUTHORITY'S REPORT FOR CLEVE HILL SOLAR PARK



The Planning Inspectorate
Yr Arolygiaeth Gynllunio

The Planning Act 2008

CLEVE HILL SOLAR PARK

Examining Authority's Report
of Findings and Conclusions

and

Recommendation to the Secretary of State for
Business, Energy and Industrial Strategy

Examining Authority

David M H Rose BA (Hons) MRTPI, Panel Lead

Andrew Mahon BSc MBA CMLI CEnv MIEMA MCIEEM

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28 February 2020

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OVERVIEW

File Ref: EN010085

The Application, dated 15 November 2018, was made under section 37 of the Planning Act 2008 and was received in full by The Planning Inspectorate on 16 November 2018.

The Applicant is Cleve Hill Solar Park Ltd.

The Application was accepted for examination on 14 December 2018.

The examination of the Application began on 30 May 2019 and was completed on 30 November 2019.

The development proposed comprises the construction, operation, maintenance and decommissioning of a solar photovoltaic array with either an electrical storage facility or an extension to the solar photovoltaic array, together with connection infrastructure and other Associated Development. Both the solar photovoltaic array and the energy storage facility would have a capacity of greater than 50MW.

Summary of Recommendation:

The Examining Authority recommends that the Secretary of State should make the Order in the form attached.

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ERRATA SHEET – Cleve Hill Solar Park – Ref. EN010085

Examining Authority`s Report of Findings and Conclusions and Recommendation to the Secretary of State for the Department of Energy and Climate Change, dated 28 February 2020

Corrections agreed by the Examining Authority prior to a decision being made:

| Page No. | Paragraph | Error | Correction |
|----------|---------------------------------|---|---|
| 34 | 3.8.1 | “The Dogger Bank Creyke Beck Order 2015” | “The Dogger Bank Creyke Beck Offshore Wind Farm Order 2015” |
| 169 | 8.3.90 (1 st bullet) | “... The Proposed Development is therefore complaint with...” | “... The Proposed Development is therefore compliant with...” |
| 177 | 8.4.58 (3 rd bullet) | “The Proposed Development is policy complaint with the NPPF...” | “The Proposed Development is policy compliant with the NPPF...” |
| 191 | 8.5.98 (1 st bullet) | “The Proposed Development is therefore complaint with NPS EN-1...” | “The Proposed Development is therefore compliant with NPS EN-1...” |
| 191 | 8.5.98 (2 nd bullet) | “...and the Proposed Development is therefore complaint with NPS EN-1...” | “...and the Proposed Development is therefore compliant with NPS EN-1...” |

1. INTRODUCTION

1.1. INTRODUCTION TO THE EXAMINATION

1.1.1. The Application for the Cleve Hill Solar Park (the Proposed Development) (EN010085) was submitted by Cleve Hill Solar Park Ltd (the Applicant) to the Planning Inspectorate on 15 November 2018 under section (s)31 of the Planning Act 2008 (PA2008) and accepted for Examination under s55 of the PA2008 on 14 December 2018.

1.1.2. The Proposed Development comprises:

- a ground-mounted solar photovoltaic (PV) generating station with a gross electrical output capacity of more than 50 megawatts (MW) comprising arrays of panels fitted to mounting structures fixed to the ground by piles, inverters, transformers, and a network of underground cables;
- an energy storage facility with a gross storage capacity of more than 50MW along with a flood protection bund, transformers, switch gear, underground cables, a construction compound and landscaping;
- a substation enclosed within a flood protection bund, with a network of underground cable circuits to connect the substation to the array, the storage facility and an existing substation;
- a network of cable circuits, construction compounds, landscaping, earthworks, drainage, and the undergrounding of existing overhead line;
- a means of access to an existing highway;
- habitat management areas; and
- the maintenance of an existing coastal flood defence.

1.1.3. The location of the Proposed Development is approximately 2km north-east of Faversham and 5km west of Whitstable on the north Kent coast, and is shown in Figure 1.1 of the Environmental Statement (ES) [APP-050]¹. The site lies in the administrative districts of Swale Borough Council and Canterbury City Council within the administrative county of Kent and is wholly in England.

1.1.4. The legislative tests for whether the Proposed Development is a Nationally Significant Infrastructure Project (NSIP) were considered by the Secretary of State (SoS) for the Department for Business, Energy and Industrial Strategy (BEIS) and it was decided to accept the Application for Examination in accordance with s55 of the PA2008.

1.1.5. On this basis, the Planning Inspectorate agreed with the Applicant's view stated in the application form [APP-002] that the Proposed Development is an NSIP as both the solar PV array electricity generating facility and the electrical storage facility have a total capacity exceeding 50MW, which places them in s15(2)(a) and s15(2)(c) of the PA2008, and so

¹ References to documents in the Examination Library for this Report are enclosed in square brackets []. A full index to the Examination Library can be found at Appendix A.

require development consent in accordance with s31 of the PA2008. The Proposed Development therefore meets the definition of an NSIP set out in s14(1)(a) of the PA2008.

1.2. APPOINTMENT OF THE EXAMINING AUTHORITY

1.2.1. On 15 March 2019, David Rose and Andrew Mahon were appointed as the Examining Authority (ExA) for the Application under s61 and s65 of the PA2008 [PD-002].

1.2.2. An additional member, Helen Cassini, was appointed to the ExA under Rule 4 of the Infrastructure Planning (Examination Procedure) Rules 2010 with effect from 21 June 2019 after a review of the project following the Preliminary Meeting [PD-006].

1.3. THE PERSONS INVOLVED IN THE EXAMINATION

1.3.1. The persons involved in the Examination were:

- persons who were entitled to be Interested Parties (IPs) because they had made a Relevant Representation (RR) or were a Statutory Party who requested to become an IP;
- Affected Persons (APs) who were affected by a Compulsory Acquisition (CA) or Temporary Possession (TP) proposal made as part of the Application and objected to it at any stage in the Examination; and
- Other Persons, who were invited to participate in the Examination by the ExA because they were either affected by it in some other relevant way or because they had particular expertise or evidence that the ExA considered to be necessary to inform the Examination.

1.4. THE EXAMINATION AND PROCEDURAL DECISIONS

1.4.1. The Examination began on 30 May 2019 and concluded on 30 November 2019.

1.4.2. The principal components of and events around the Examination are summarised below.

The Preliminary Meeting

1.4.3. On 18 April 2019, we wrote to all IPs, Statutory Parties and Other Persons under Rule 6 of the Infrastructure Planning (Examination Procedure) Rules 2010 (EPR) (the Rule 6 Letter) inviting them to the Preliminary Meeting (PM) [PD-003], outlining:

- the arrangements and agenda for the PM;
- an Initial Assessment of the Principal Issues (IAPI);
- the draft Examination Timetable;
- availability of RRs and Application documents; and
- the ExA's procedural decisions.

1.4.4. The PM took place on 30 May 2019 at The Alexander Centre in Faversham. An audio recording [EV-001] and a note of the meeting

[EV-001A] were published on the project page of the Planning Inspectorate National Infrastructure website.

- 1.4.5. During the welcome and introductions, two IPs, Professor Sir David Melville on behalf of The Faversham Society, and Mr Knox-Johnston on behalf of The Campaign to Protect Rural England (CPRE) Kent, raised oral concerns regarding the appointment of Mr David Rose as the lead member of the panel of the ExA. They expressed their concern that, as Mr Rose had been the appointed Inspector in the appeal regarding the London Array substation at Cleve Hill², there was an apparent conflict of interest in his involvement with this Application.
- 1.4.6. We quoted from a written reply, published on the project web page [OD-003] from the Professional Lead for National Infrastructure, on behalf of the SoS. We also confirmed our impartiality by reference to our professional codes of conduct and the Planning Inspectorate's underlying principles that Planning Inspectors would act with fairness, openness and impartiality. Subsequent correspondence regarding this matter was also published on the project web page [OD-005 and OD-006].
- 1.4.7. Our procedural decisions and the Examination Timetable took full account of matters raised at the PM. They were provided in the Rule 8 Letter [PD-005] dated 7 June 2019.

Key Procedural Decisions

- 1.4.8. The procedural decisions set out in the Rule 8 Letter were confined to matters relating to the procedure of the Examination and did not bear on our consideration of the planning merits of the Proposed Development. Further, they were complied with by the Applicant and relevant IPs. The decisions can be obtained from the Rule 8 Letter [PD-005] and they are not repeated here.

Site Inspections

- 1.4.9. We undertook Site Inspections to ensure that we had an adequate understanding of the Proposed Development within its site and surroundings and to help visualise its physical and spatial effects.
- 1.4.10. Where the matters for inspection could be viewed from the public domain and there were no other considerations such as personal safety or the need for the identification of relevant features or processes, we conducted an Unaccompanied Site Inspection (USI). As some inspections required consent to access land, there were safety or other technical considerations, or there were requests made by IPs to accompany the inspection, an Accompanied Site Inspection (ASI) was held.
- 1.4.11. We undertook the following USIs:

² Further details of the appeal (Reference APP/V2255/A/06/2024515) are set out in paragraph 2.3.2 of this Report

- USI1, 29 May 2019, to walk around the boundary of the Proposed Development Site [EV-002];
- USI2, 31 May 2019, to view the Proposed Development Site from the higher ground associated with Blean Wood to the south-east [EV-003];
- USI3, 18 July 2019, to experience the open views towards and across the Proposed Development Site from the Estuary View Business Park [EV-003A];
- USI4, 19 July 2019, from Hollowshore to Nagden along the Saxon Shore Way on the western bank of Faversham Creek to experience the easterly views towards the Proposed Development Site [EV-003B];
- USI5, 23 July 2019, to experience the views of the Proposed Development Site from the Saxon Shore Way between Oare Marshes and the confluence of Oare and Faversham Creeks [EV-003C];
- USI6, 24 July 2019, to inspect the views towards the site from key viewpoints on the southern shore of the Isle of Harty, which lies to the north of the Proposed Development Site on the north bank of The Swale [EV-003D]; and
- USI7, 12 September 2019, to inspect four additional heritage assets identified by a local community group; three along Church Road in Oare and one at Standard Quay, Faversham [EV-003E].

1.4.12. Notes providing a procedural record of these USIs can be found in the Examination Library under the above references.

1.4.13. We also undertook an ASI on 24 July 2019. We looked at the existing Cleve Hill substation and viewed the Proposed Development Site and some of the proposed Habitat Management Areas from close quarters from the existing substation and its access road, and from the southern end of the proposed permissive path across the Proposed Development Site. We also viewed the Proposed Development Site from a number of properties to the south and from All Saints Church in Graveney, including an inspection from the roof of the Church Tower [EV-010].

1.4.14. The itinerary for the ASI can be found in the Examination Library under the above reference.

1.4.15. We have had regard to the information and impressions obtained during our site inspections in all relevant sections of this Report.

Hearing Processes

1.4.16. Hearings were held in relation to two main circumstances:

- To respond to specific requests from persons who had a right to be heard:
 - where persons affected by Compulsory Acquisition (CA) or Temporary Possession (TP) proposals (APs) objected and requested to be heard at a Compulsory Acquisition Hearing (CAH); and
 - where IPs requested to be heard at an Open Floor Hearing (OFH).

- To address matters where we considered that a Hearing was necessary to inquire orally into matters under examination because they were complex, there was contention or disagreement, or the application of relevant law or policy was not definitive.
- 1.4.17. We held a number of Hearings to ensure a thorough examination of the issues raised by the Application, as follows.
- 1.4.18. Issue Specific Hearings (ISHs) (in accordance with s91 of the PA2008) were held at The Alexander Centre in Faversham and at Hempstead House Hotel, Bapchild (near Sittingbourne), which are some 6.5km (4 miles) and 15km (9 miles) respectively from Graveney, a village on the edge of the site of the Proposed Development.
- 1.4.19. ISHs were held on the following subject matters:
 - ISH1, 17 July 2019, on the Need for the Proposed Development (an audio recording was made [EV-016]);
 - ISH3, 23 July 2019, on Landscape and Visual Amenity Matters (an audio recording was made [EV-019]);
 - ISH4, 25 July 2019, on Biodiversity and Nature Conservation Matters (an audio recording was made [EV-020]); and
 - ISH6, 11 September 2019, on Environmental Matters (an audio recording was made [EV-027]).
- 1.4.20. ISHs were held on the subject matter of the draft Development Consent Order (dDCO) on:
 - ISH2, 18 July 2019, (an audio recording was made [EV-017]); and
 - ISH5, 10 September 2019, (an audio recording was made [EV-026]).
- 1.4.21. During the course of the PM, several IPs suggested additional topics for ISHs, including traffic and transport. We considered these carefully but concluded that the topics could most effectively be dealt with by hearing local concerns at Open Floor Hearings (OFHs) and by means of our Written Questions.
- 1.4.22. Following the first round of ISHs in July, some IPs requested additional ISHs be held in the second round of Hearings in September. We agreed with the suggestion that there was a need for further examination of matters relating to biodiversity and nature conservation, cultural heritage, risks associated with the battery storage technology and Agricultural Land Classification and incorporated these into the agenda for the broader Environmental Matters ISH in September. Other requested topics included a further examination of the Applicant's needs case. We considered the requests carefully but concluded that other topics could most effectively be dealt with by means of our Written Questions, signed Statements of Common Ground (SoCG) and Written Representations (WRs).

- 1.4.23. Two Compulsory Acquisition Hearings (CAHs) were held under s92 of the PA2008:
- CAH1 on 16 July 2019 at the Alexander Centre in Faversham (an audio recording was made [EV-013]); and
 - CAH2 on 12 September 2019 at Hempstead House Hotel, Bapchild (near Sittingbourne) (an audio recording was made [EV-028]).
- 1.4.24. All persons affected by CA and TP proposals (APs) were provided with an opportunity to be heard. We also used these Hearings to examine the Applicant's case for CA and TP in the round.
- 1.4.25. OFHs were held under s93 of the PA2008 at the Alexander Centre in Faversham on the morning of 16 July 2019 (an audio recording was made [EV-012]), in the evening of 22 July 2019 at Hempstead House Hotel, Bapchild (near Sittingbourne) (an audio recording was made [EV-018]), and in the morning of 10 September 2019 at Hempstead House Hotel (an audio recording was made [EV-026]). All IPs were provided with an opportunity to be heard on any important and relevant subject matter that they wished to raise.

Written Processes

- 1.4.26. In accordance with the PA2008, the Examination was primarily a written process, in which the ExA had regard to each item of written material forming the Application and arising from the Examination. All material was recorded in the Examination Library (Appendix A) and published on the project page of the Planning Inspectorate's National Infrastructure website. Individual document references to the Examination Library in this Report are enclosed in square brackets '[]'. For this reason, this Report does not contain extensive summaries of all documents and representations, although full regard has been had to them in our conclusions. We have considered all important and relevant matters arising from them.
- 1.4.27. Key written sources are set out further below.

Relevant Representations

- 1.4.28. 866 Relevant Representations (RRs) were received by the Planning Inspectorate, including one late RR accepted at our discretion ([RR-001] to [RR-048], [RR-050] to [RR-067], [RR-069] to [RR-867] and [AS-011]). Each person and organisation that made a RR received the Rule 6 Letter and was provided with an opportunity to participate in the Examination as an IP. We have fully considered all RRs. The issues that they raise are considered in Chapters 5 to 8 of this Report.

Written Representations and other Examination documents

- 1.4.29. The Applicant, IPs and Other Persons were provided with opportunities to:
- make WRs (Deadline 2 (D2));

- comment on WRs and subsequent written comments made by the Applicant and other IPs (D3, D4, D5, D6 and D7);
- summarise their oral submissions at Hearings in writing (D3 and D5);
- make other written submissions requested or accepted by the ExA (D3, D4, D5, D6 and D7); and
- comment on our Report on Implications for European Sites (RIES) [PD-010] issued for consultation on 23 October 2019 (D7).

1.4.30. We also received a considerable number of submissions later in the Examination from non-Interested Parties, including approximately 50 at Deadline 7 (for example, [REP-119] to [REP7-150]). We were content that these did not raise any substantially new planning issues. We used our discretion to accept them into the Examination. The Applicant and IPs had the opportunity to comment on them.

1.4.31. We have fully taken into account all WRs and other Examination documents. The issues that they raise are considered in Chapters 5 to 8 of this Report.

Local Impact Reports

1.4.32. Local Impact Reports (LIRs) were made by three local authorities to provide details of the likely impact of the Proposed Development on the authorities' areas. These were invited by, and submitted to, the ExA under s60 of the PA2008.

1.4.33. LIRs were received at Deadline 1 from Swale Borough Council [REP1-005] and Kent County Council [REP1-004]. A further LIR was received the day after Deadline 1 from Canterbury City Council [REP1-002] and we used our discretion to accept it into the Examination.

1.4.34. We have taken these LIRs fully into account in all relevant chapters of this Report.

Statements of Common Ground

1.4.35. A SoCG is a statement made by the Applicant and one or more IPs, recording matters that are agreed and not agreed between them.

1.4.36. By the end of the Examination, the following bodies had concluded SoCGs with the Applicant, as summarised in a SoCG tracker [REP17-008] submitted by the Applicant:

- Swale Borough Council [REP4-037];
- Canterbury City Council [REP5-014];
- Kent County Council [REP7-029];
- Natural England [APP-256], [AS-050] and [REP4-039];
- Environment Agency [AS-017];
- Marine Management Organisation [AS-028];
- Historic England [REP4-038];
- Public Health England [AS-018];
- Lower Medway Internal Drainage Board [REP4-040]; and
- Kent Wildlife Trust [REP17-009].

- 1.4.37. All of these were signed or have equivalent formal attestation such as a covering email. We have taken these fully into account in all relevant chapters of this Report.
- 1.4.38. An unsigned SoCG reflecting the status of negotiations between the Applicant and National Grid Electricity Transmission plc (NGET) was agreed at Deadline 2 [REP2-030] (as confirmed via email). However, NGET subsequently withdrew its RR [AS-051] and matters between these parties are now settled, superseding the position set out in the SoCG. Therefore, we have not taken this SoCG into account in writing this Report.
- 1.4.39. The RSPB declined to enter into a SoCG with the Applicant.

Written Questions

- 1.4.40. We asked two rounds of Written Questions.
- First Written Questions (ExQ1) [PD-004] and procedural decisions were set out in the Rule 8 letter [PD-005] dated 7 June 2019.
 - Further Written Questions (ExQ2) [PD-008] were issued on 9 August 2019.
- 1.4.41. Requests for further information and comments under Rule 17 of The Infrastructure Planning (Examination Procedure) Regulations 2010 were issued on 23 October 2019 [PD-009] and 27 November 2019 [PD-011].
- 1.4.42. The first Rule 17 request covered a variety of issues, including outstanding uncertainties on the approach to Environmental Impact Assessment (EIA), the Habitats Regulations Assessment (HRA) in relation to marsh harriers, progress on agreements with Kent County Council on a number of drainage, traffic and public rights of way issues in the continuing absence of an agreed SoCG, and the situation regarding the outline Landscape and Biodiversity Management Plan (LBMP) and the constitution of the Habitat Management Steering Group (HMSG) that was proposed to oversee the implementation of some of the monitoring, adaptation and mitigation measures.
- 1.4.43. The second Rule 17 request was specifically to check that the correct requested contact details for the Marine Management Organisation had been included in the dDCO and to invite the Applicant and IPs to respond to a late submission from The Faversham Society [AS-061].
- 1.4.44. All responses to the ExA's Written Questions and Rule 17 requests have been fully considered and taken into account in all relevant chapters of this Report.

Requests to Join and Leave the Examination

- 1.4.45. The following persons who were not already IPs requested that we should enable them to join the Examination at or after the PM.
- 1.4.46. On 24 June 2019, the Kent and Medway Fire Authority made a request to become an Interested Party under s102A of the PA2008. We decided that

the Authority did not meet the relevant criteria and denied this request but made a procedural decision to accept any WR from them under Regulation 10(3) of The Infrastructure Planning (Examination Procedure) Regulations 2010 as a non-Interested Party.

- 1.4.47. Mrs Geoghegan requested to speak at OFH1 and submitted a follow-up written summary of her representation for Deadline 3. We accepted her contribution into the Examination as a non-Interested Party.
- 1.4.48. The representatives of two IPs wrote to us before the close of the Examination to inform us that their issues had been settled.
- 1.4.49. National Grid Electricity Transmission plc (NGET) told us [AS-051] that it had reached commercial agreement with the Applicant in relation to Protective Provisions in the dDCO [REP17-005] and that it was therefore withdrawing its RR [RR-825].
- 1.4.50. London Array Limited informed us [AS-062], after Protective Provisions had been inserted into the dDCO [REP7-005], that commercial agreement had been reached with the Applicant and it was withdrawing its previous representations (including [RR-807] and [AS-034]).

1.5. ENVIRONMENTAL IMPACT ASSESSMENT

- 1.5.1. On 11 December 2017, the Applicant submitted a Scoping Report [APP-198] to the SoS under Regulation 10 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended) (the EIA Regulations) with a request for an opinion about the scope of the Environmental Statement (ES) to be prepared (a Scoping Opinion). The Applicant also notified the SoS under Regulation 8(1)(b) of the EIA Regulations that it proposed to provide an ES in respect of the Proposed Development.
- 1.5.2. The Planning Inspectorate provided a Scoping Opinion [APP-199] on 19 January 2018. Therefore, in accordance with Regulation 6(2)(a) of the EIA Regulations, the Proposed Development was determined to be EIA development, and the Application submitted on 15 November 2018 was accompanied by an ES.
- 1.5.3. A notice from the Applicant [OD-002] provided confirmation that s56 and s59 of the PA2008 and Regulation 16 of the EIA Regulations had been complied with [APP-023].
- 1.5.4. Consideration is given to the adequacy of the ES and matters arising from it in Chapter 4 of this Report.

1.6. HABITATS REGULATIONS ASSESSMENT

- 1.6.1. The Proposed Development is development for which a Habitats Regulations Assessment (HRA) Report (Report to Inform Appropriate Assessment [APP-026], superseded by [REP7-011]) has been provided.

- 1.6.2. Under Regulation 5(2) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (the APFP Regulations), where required, an Application must be accompanied with sufficient information to enable the relevant SoS to meet her or his statutory duties as the competent authority under the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations).
- 1.6.3. Consideration is given to the adequacy of the HRA Report, associated information and evidence and the matters arising from it in Chapters 4 and 9 of this Report.

1.7. UNDERTAKINGS, OBLIGATIONS AND AGREEMENTS

1.7.1. By the end of the Examination, the following bodies had entered into formal undertakings, obligations or agreements with the Applicant that are important and relevant considerations for the Secretary of State:

- NGET told us [AS-051] that it had reached agreement with the Applicant in relation to Protective Provisions in the dDCO and other commercial negotiations; and
- London Array Limited informed us [AS-062] that commercial agreement had been reached and it was satisfied that its interests were protected.

1.7.2. We have taken undertakings, obligations and agreements fully into account in all relevant chapters of this Report.

1.8. OTHER CONSENTS

1.8.1. The Application documentation and questions during this Examination have identified the following principal consents that the Proposed Development has obtained or must obtain, in addition to Development Consent under the PA2008. The latest position on these is recorded in the Applicant's '*Consents and Licences required Under Other Legislation*', [APP-255] and listed below:

- An Electricity Generation Licence under the Electricity Act 1989 was granted by OFGEM on 9 November 2018 [APP-255];
- A Bilateral Connection Agreement is required to connect the Proposed Development to the National Electricity Transmission System (NETS) - the Applicant accepted a grid connection offer on 25 October 2018 [APP-029];
- An Environmental Permit for flood risk activities will be required from the Environment Agency under the Environmental Permitting (England and Wales) Regulations 2016 - the Applicant has advised an intention to apply for this post-grant of any Development Consent Order (DCO) and prior to construction commencing [APP-255];
- Land drainage consent will be needed from the Lower Medway Internal Drainage Board (IDB) for all new crossings, flow control equipment and other structures on IDB watercourse assets under the Land Drainage Act 1991. The IDB will need to undertake appropriate consultation and ensure the new structures do not have any unacceptable impacts, particularly on upstream landowners. A SoCG

between the two parties [REP4-040] notes that consent will not be given in advance since at this stage the type of culvert and their exact location have yet to be submitted - the Applicant has indicated an intent to apply for such consent in parallel with the discharge of the relevant Requirements 2(h), 8 and 10 of dDCO³;

- Ordinary watercourse consent will be needed from Kent County Council (as Lead Local Flood Authority) for all new crossings, flow control equipment and other structures on ordinary watercourses under the Land Drainage Act 1991 - the Applicant has indicated [REP4-040] an intent to apply for such consent in parallel with the discharge of the relevant Requirements 2(h), 8 and 10 of the dDCO⁴;
- Should groundwater dewatering be required, an application for a Water Abstraction or Impoundment Licence would need to be made to the Environment Agency under the Water Resources Act 1991 (as amended) - the Applicant has advised this would be made by the appointed contractor before construction commences as appropriate [APP-255];
- Draft European Protected Species Mitigation Licences from Natural England were discussed during the Examination in relation to any effects of the proposed works on great crested newt, water vole and hazel dormouse (Conservation of Habitats and Species Regulations 2017) and 'letters of no impediment' from Natural England relating to great crested newt and water vole were submitted into the Examination [REP3-029] - following investigation, the Applicant determined that a licence was not required for hazel dormouse [REP5-024] - this is discussed further in Chapter 7 of this Report;
- Science, Education and Conservation Class Licences may be necessary in relation to certain species protected under the Wildlife and Countryside Act 1981 (as amended) - the Applicant has indicated that discussions would be commenced with Natural England if required [APP-255];
- Some of the proposed enhancement works on the existing Site of Special Scientific Interest (SSSI) may require permission from Natural England under the Wildlife and Countryside Act 1981 (as amended) - the Applicant has indicated that discussions would be commenced if required [APP-255];
- Any applications for consents required under the Health and Safety at Work Act 1974 and subsidiary legislation would be made to the HSE by the appointed contractor before construction commences [APP-255];
- A permit will be required for the transport of abnormal indivisible loads to the site under the Road Vehicles (Authorisation of Special Types) (General) Order 2003 or with authorisation from the SoS under the Road Traffic Act 1988. Temporary Road Traffic Orders and Other Street Works Consents may also be required from the highway authority. Applications that accord with the certified Construction Traffic Management Plan will be made by the appointed contractor in advance of abnormal load movements [APP-255]. Consent will be

³ Requirements 2(h), 9 and 11 in the final dDCO [REP17-003]

⁴ Requirements 2(h), 9 and 11 in the final dDCO [REP17-003]

required for these loads to cross a Network Rail owned bridge in Graveney (VIR 761). The Applicant has submitted an email from Network Rail accepting this, subject to conditions [REP5-018];

- Section 278 Agreement may be required to undertake any necessary remedial works to the highway - this would be agreed with Kent County Council as the highway authority as and when necessary [APP-255];
- Section 61 consent relating to control of construction noise may be required from Swale Borough Council under the Control of Pollution Act 1974 - the Applicant has indicated that any necessary applications would be made by the appointed contractor a minimum of 28 days before construction commences; and
- As the outline Written Scheme of Investigation proposes metal detection surveys at a known World War 2 (WWII) crash site, a relevant licence would be sought by the appointed archaeological contractor under the Protection of Military Remains Act 1986 from the Ministry of Defence before the survey commences [APP-255].

1.8.2. In relation to the consents recorded above, we have considered the available information bearing on these and, without prejudice to the exercise of discretion by future decision-makers, have concluded that there are no apparent impediments to the implementation of the Proposed Development, should the SoS grant the Application.

1.9. STRUCTURE OF THIS REPORT

1.9.1. The structure of this Report is as follows:

- **Chapter 1** introduces the reader to the Application, the processes used to carry out the Examination and make this Report;
- **Chapter 2** describes the site and its surrounds, the Proposed Development, its planning history and that of related projects;
- **Chapter 3** records the legal and policy context for the SoS's decision;
- **Chapter 4** sets out the planning issues that arose from the Application and during the Examination;
- **Chapter 5** addresses the findings and conclusions of the ExA in relation to meeting energy needs;
- **Chapter 6** addresses the findings and conclusions of the ExA in relation to landscape and visual effects;
- **Chapter 7** addresses the findings and conclusions of the ExA in relation to biodiversity and nature conservation;
- **Chapter 8** addresses the findings and conclusions of the ExA in relation to the remaining planning issues;
- **Chapter 9** considers effects on European Sites and HRA;
- **Chapter 10** sets out the balance of planning considerations arising from Chapters 4, 5, 6, 7 and 8 in the light of the factual, legal and policy information in Chapters 1, 2 and 3;
- **Chapter 11** sets out the ExA's examination of CA and TP proposals;
- **Chapter 12** considers the implications of the matters arising from the preceding chapters for the DCO; and
- **Chapter 13** summarises all relevant considerations and sets out the ExA's recommendation to the SoS.

1.9.2. This Report is supported by the following Appendices:

- **Appendix A** – The Examination Library;
- **Appendix B** – List of Abbreviations;
- **Appendix C (i)** – The Recommended DCO; and
- **Appendix C (ii)** – Indicative Draft Amendment to Requirement 2 of the DCO.

2. THE PROPOSAL AND THE SITE

2.1. THE APPLICATION AS MADE

- 2.1.1. The Applicant, Cleve Hill Solar Park Ltd (a joint venture formed by Hive Energy Ltd and Wirsol Energy Ltd) submitted an application for the construction, operation, maintenance and decommissioning of a ground-mounted solar photovoltaic (PV) generating station and an energy storage facility, together with a connection to an existing substation and other associated infrastructure.

The Proposed Development Site (Figure 1.1 of the Environmental Statement [APP-050])



- 2.1.2. The Proposed Development Site is known as Cleve Hill and is shown on Ordnance Survey maps as Nagden, Cleve and Graveney Marshes. The centre lies approximately 2km north-east of Faversham and 5km west of Whitstable on the north Kent coast [APP-050]. The total area covered by the Proposed Development Site is 491.2ha. It is predominantly in arable use, with some freshwater grazing marsh, as shown on Figure 5.1 of the Environmental Statement (ES) [APP-053]. The area also includes an existing coastal flood defence and the existing Cleve Hill substation.
- 2.1.3. The arable farmland was previously marshland within the wider Thames Estuary that was progressively drained from the medieval period. It broadly achieved its current form by the 19th century though continued to evolve into the 20th Century, as evidenced by World War 2 (WWII) related defensive structures. Most recently, the local landscape was affected by infrastructure associated with high voltage lines and pylons

and the London Array Offshore Wind Farm Onshore Connector and the associated Cleve Hill substation.

- 2.1.4. Arable land accounts for approximately 387.6ha of the Proposed Development Site. The large fields are separated by drainage channels that run predominantly from south to north. The majority of the arable land is flat and low lying with elevations typically ranging from 0m to 3m Above Ordnance Datum (AOD). Land in the south-eastern corner of the Proposed Development Site rises to an elevation of approximately 15m AOD at Graveney Hill.
- 2.1.5. The area of freshwater grazing marsh included in the Proposed Development Site comprises approximately 35.1ha of land to the east of the main development area, between the arable land to the west, Seasalter Road to the east and the existing coastal flood defences to the north. It is shown on Figure 5.1 of the ES [APP-053]. This land is also flat and low-lying, and the fields are separated by drainage ditches, but here the fields are generally smaller. The freshwater grazing marsh forms part of The Swale Site of Special Scientific Interest (SSSI), Special Protection Area (SPA) and Ramsar site.
- 2.1.6. An existing coastal flood defence structure is also included within the Proposed Development Site boundary. Currently maintained by the Environment Agency, this protects the site and some adjacent land from inundation by the sea. The majority of the 58.5ha of land comprising the flood defence lies within The Swale SSSI, SPA and Ramsar site. The Saxon Shore Way long distance footpath runs along the crest of the structure.
- 2.1.7. Seven further public footpaths run adjacent to or across the site, as shown on Figure 13.1 of the ES [APP-060].
- 2.1.8. There is an almost complete strip of at least 50m of freshwater grazing marsh on the landward side of the coastal flood defence structure, except in the south-western part of the Proposed Development Site where the arable land abuts it.
- 2.1.9. The coastal flood defence structure varies in construction from a vegetated earth bank to a concrete blockwork embankment. In places, there is rock armour toe protection supporting a recurved concrete parapet wall, and beach groynes front the structure in parts. The seaward side comprises shingle beach and some saltmarsh, most notably at the Castle Cote Nature Reserve, with mudflats below the mean high-water mark.
- 2.1.10. A further raised flood defence structure with a public right of way running along part of its crest forms the eastern boundary of the Proposed Development Site, running parallel with and adjacent to Seasalter Road.
- 2.1.11. Much of the Proposed Development Site lies within a locally designated Area of High Landscape Value (AHLV) (policy DM 24 of Bearing Fruits 2031: The Swale Borough Local Plan, 2017 (The Swale Borough Local

Plan)), amended to the 'North Kent Marshes - South Swale Local Landscape Designation' in 2018.

- 2.1.12. The existing Cleve Hill substation lies within the Proposed Development Site. This serves the London Array Offshore Wind Farm and includes the wind farm substation, cabling and a National Grid Electricity Transmission plc (NGET) substation. Vehicle access is provided along a private road from a junction with Seasalter Road. A 400 kilovolt (kV) overhead line serves the existing substation and crosses the site from east to west on lattice towers. An 11kV overhead line on wooden posts runs across the southern part of the Proposed Development Site from Nagden eastward towards Cleve Farm, with a short spur south to Warm House.

The Surroundings

- 2.1.13. The Proposed Development Site lies immediately to the south of The Swale, with the eastern end of the Isle of Sheppey (also known as the Isle of Harty) lying to the north of the estuary some 2km from the Proposed Development Site boundary [APP-050]. The Swale is notified as a SSSI and designated as a SPA and Ramsar site as shown in Figure 9.2 of the ES [APP-056].
- 2.1.14. The grazing marsh of Graveney Marshes and Seasalter Level continues to the east across Seasalter Road, which marks part of the eastern boundary of the Proposed Development Site. Oare Creek and Faversham Creek, tributaries of The Swale, form the western site boundary, while the southern boundary borders mixed agricultural land with glasshouses and polytunnels around Nagden, Broom Street and Graveney Hill.
- 2.1.15. The nearest residential properties lie close to the Proposed Development Site boundary at Nagden, Warm House and Cleve Hill, with hospitality and recreational facilities near to the Proposed Development Site boundary at the point where Seasalter Road meets the coast. The dispersed and predominantly linear village of Graveney, with a nucleus of residential properties and park homes in the vicinity of the primary school and public house, lies close to the south-eastern corner of the Proposed Development Site. It encompasses a conservation area and a number of listed buildings, including the grade I listed All Saints Church in Graveney, as indicated in Figure 11.2 of the ES [APP-058].
- 2.1.16. The area is served by Seasalter Road, part of a minor road that runs from the A299 close to its origin at junction 7 of the M2 to the coast at Seasalter and on as Faversham Road into Whitstable. National Cycle Network Route 1 runs along Seasalter Road for approximately 1.5km before turning west onto Sandbanks Road in Graveney, from where it runs to the south of Broom Street, Sandbanks and the Proposed Development Site boundary before heading south to Faversham. This is shown in Figure 13.1 of the ES [APP-060]).
- 2.1.17. The nearest towns are Faversham and Whitstable, approximately 1.5km and 2.2km from the Proposed Development Site boundary respectively. The City of Canterbury lies some 8km to the south-east.

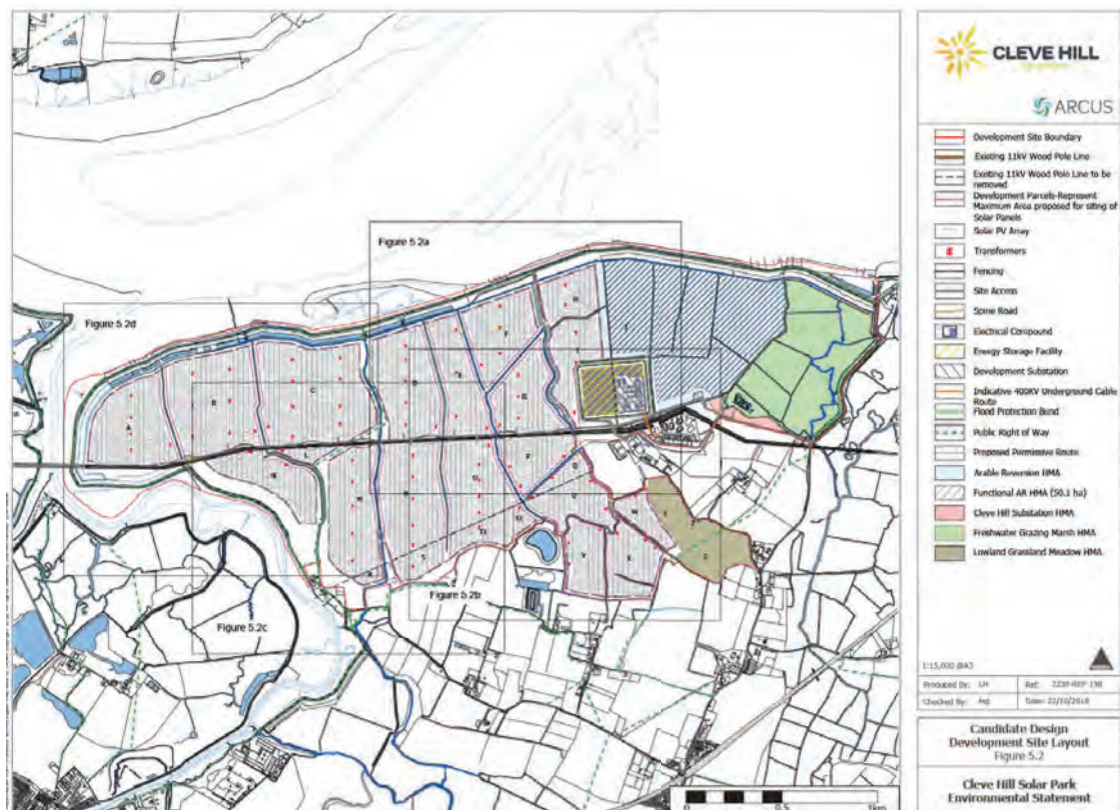
- 2.1.18. The Kent Downs Area of Outstanding Natural Beauty (AONB) is located approximately 4km to the south of the Proposed Development Site ([APP-054], Figure 7.8). A locally designated AHLV (policy DM 24 of The Swale Borough Local Plan) lying some 2.5km to the south-east has a variety of popular walks with viewpoints towards the Proposed Development Site from a wooded ridge and slopes around Victory Wood, Blean Wood, Holly Hill and Mount Ephraim ([APP-054], Figure 7.8).

Main Features of the Proposed Development

- 2.1.19. The Proposed Development for which consent is sought under s14 and s15 of the Planning Act 2008 (PA2008), as described in the Application documents, comprises:
- a ground-mounted solar PV generating station with a gross electrical output capacity of more than 50 megawatts (MW) comprising panels fitted to mounting structures fixed to the ground by piles, inverters, transformers, and a network of underground cables; and
 - an energy storage facility with a gross storage capacity of more than 50MW including transformers, switch gear, ancillary equipment, cable circuits and underground connection cables.
- 2.1.20. In addition, consent is sought under s115(2) of the PA2008 for Associated Development, comprising:
- a substation enclosed within a flood protection bund, with construction compounds, a network of cable circuits and underground connection cables to connect the substation to the array, the storage facility and an existing substation, together with works to lay those cables;
 - works comprising a network of cable circuits, construction compounds, landscaping, earthworks, drainage, and the undergrounding of an existing overhead power line;
 - the creation and maintenance of a means of access to an existing highway, including the alteration and maintenance of an existing access road;
 - works to create, manage, access and drain a habitat management area;
 - works to maintain an existing coastal flood defence; and
 - further Associated Development including:
 - i. works for the provision of fencing and security measures such as CCTV and lighting;*
 - ii. laying down of internal access tracks;*
 - iii. ramps, means of access and footpaths;*
 - iv. bunds, embankments, and swales;*
 - v. boundary treatments, including means of enclosure;*
 - vi. permissive paths;*
 - vii. habitat creation and management;*
 - viii. jointing bays, cable ducts, cable protection, joint protection, manholes, kiosks, marker posts, underground cable marker, tiles and tape, and lighting and other works associated with cable laying;*

- ix. works for the provision of apparatus including cabling, water supply works, foul drainage provision, surface water management systems and culverting;
- x. works to alter the position of apparatus, including mains, sewers, drains and cables;
- xi. works to alter the course of, or otherwise interfere with, non-navigable rivers, streams or watercourses;
- xii. landscaping and other works to mitigate any adverse effects of the construction, maintenance or operation of the authorised project;
- xiii. works for the benefit or protection of land affected by the authorised project; and
- xiv. working sites in connection with the construction of the authorised project, construction lay down areas and compounds, storage compounds and their restoration.

The Candidate Design (Figure 5.2 of the Environmental Statement [APP-053])



- 2.1.21. The draft DCO (dDCO) seeks consent for up to two generating stations, each Nationally Significant Infrastructure Projects (NSIPs) in their own right. The first is the main solar PV array with a gross electrical output capacity of more than 50MW. Flexibility is sought for the second to be either a battery-based energy storage facility with a gross storage capacity of more than 50MW or an extension to the main solar PV array.
- 2.1.22. The Applicant expects energy storage to be an important and viable part of the Proposed Development by the start of construction but seeks flexibility in any Development Consent Order (DCO) to permit additional solar PV panels on the land identified for the energy storage facility should this prove not to be the case. The Applicant notes that the

capacity of the latter option in itself is likely to be below 50MW but suggests that it is nevertheless an NSIP as it constitutes 'an extension of a generating station' in accordance with s15(1) of the PA2008.

- 2.1.23. The solar PV array would generate electricity during the daytime, particularly when there was high solar irradiance. The energy storage facility would help to balance the output of the solar PV array to the National Electricity Transmission System (NETS), so that stored energy could be utilised at times of increased demand or when there is a sudden change in power supply or demand on the Grid.

Scope

- 2.1.24. The Proposed Development is described in full in Part 1 of Schedule 1 of the Applicant's original dDCO [APP-016] and from paragraph 2.11 of the accompanying Explanatory Memorandum [APP-018].
- 2.1.25. As detailed above, the Application seeks consent for a range of Associated Developments. It also seeks consent for developments including associated construction and operational infrastructure, works associated with habitat management areas, the maintenance of an existing coastal flood defence, and permissive paths.
- 2.1.26. Annexes A and B to the DCLG Guidance, *Planning Act 2008: associated development applications for major infrastructure projects* (April 2013), include substations and improvements to vehicular accesses as examples of Associated Development. The guidance does, however, state that the development listed in the Annexes should not be treated as Associated Development as a matter of course. Whether a specific element of a proposal is Associated Development for the purposes of s115 of the PA2008 is a matter of fact and degree, and this was thoroughly tested during the course of the Examination, as reported in Chapter 11 of this Report.

Grid Connection

- 2.1.27. The solar array and energy storage facility will supply electricity to the NETS operated by NGET. NGET is currently the system operator for the complete NETS and transmission owner for England and Wales. It holds a transmission licence issued pursuant to the Electricity Act 1989.
- 2.1.28. Cleve Hill Solar Park Ltd received a grid connection offer from NGET on 9 August 2018, offering connection to the existing Cleve Hill 400kV substation. That offer was accepted by Cleve Hill Solar Park Ltd on 25 October 2018. Should the battery storage option be constructed, the connection to the NETS would be an import and export connection to facilitate the charging of the energy storage facility from external sources.
- 2.1.29. As such, Cleve Hill Solar Park Ltd has confirmed that output of the solar array and energy storage facility would be exported via the NETS.

2.2. THE APPLICATION AS EXAMINED AND AT THE CLOSE OF THE EXAMINATION

- 2.2.1. Changes to the key Application documents and the dDCO were submitted and updated during the course of the Examination. Many of the changes sought to address points and questions raised by the Examining Authority (ExA) and Interested Parties (IPs) and to reflect the evolution of detail and clarity. Updates to the documents were recorded in the Applicant's 'Guide to the Application' [REP17-002]. This was a 'live' document that was updated at each Deadline when new or revised documents were submitted into the Examination.
- 2.2.2. The Applicant originally included two options in the dDCO for taking powers for the maintenance of those parts of the existing coastal flood defences at the Proposed Development Site that lie below mean high water at spring tides (MHWS). The Statement of Common Ground (SoCG) between the Applicant and the Marine Management Organisation (MMO) [AS-028] explains that during consultation the MMO advised against the first option of transferring the exemptions to marine licensing currently available to the Environment Agency to the Applicant, but in principle supported the second option of a Deemed Marine Licence in the dDCO. Subsequently, at Deadline 2, the Applicant confirmed that a Deemed Marine Licence would be pursued and deleted the version of Article 29 of the dDCO that sought exemption from marine licensing [REP2-003].
- 2.2.3. In a letter dated 30 August 2019, submitted at Deadline 4 [REP4-001], together with amended Application documents as necessary, the Applicant discounted a standalone battery option in favour of a containerised lithium-ion battery solution. Both options had been assessed in the ES.
- 2.2.4. The original Application included two options for an on-site access route to the Proposed Development Site in the vicinity of the existing Cleve Hill substation, known as the northern and southern access route options. On 5 November 2019, between Deadline 6 and Deadline 7, the Applicant submitted confirmation [AS-043] that the access route to the south of the existing Cleve Hill substation would be retained in the Application and that the northern route option had been discounted. Revised Application documents were submitted at the same time, where necessary [AS-044] to [AS-049]. We accepted these into the Examination.
- 2.2.5. We remained aware throughout the Examination of the need to consider whether changes to the Application documents had altered to a point where it became a different Application and whether the Secretary of State (SoS) would therefore have the power under s114 of the PA2008 to make a DCO, having regard to the original development consent applied for.
- 2.2.6. *'Planning Act 2008: Guidance for the Examination of applications for development consent'* (March 2015), provides guidance at paragraphs

109 to 115 in relation to changing an application post Acceptance⁵. The view expressed by the Government during the passage of the Localism Act 2011 was that s114(1) places the responsibility for making a DCO on the decision-maker and does not limit the terms in which it can be made⁶.

- 2.2.7. We have considered this context throughout the Examination and conclude that the changes to the Application, which primarily consisted of minor amendments to plans and revisions to the dDCO, have not resulted in significant change to that which was applied for. The Applicant did not make any change requests. The amendments have therefore been accepted for Examination purposes.

2.3. RELEVANT PLANNING HISTORY

Swale Borough Council

- 2.3.1. In its Local Impact Report (LIR) [REP1-005], Swale Borough Council noted that the Proposed Development Site had little formal planning history, given that most is open agricultural land.
- 2.3.2. The exception is the London Array Windfarm onshore substation and NGET substation and switch house at Cleve Hill which were approved, jointly by the SoS for Communities and Local Government and the SoS for Trade and Industry, on appeal, in 2007 [APP/V2255/A/06/2024515]. These are located on a site of approximately 2ha immediately adjacent to the proposed new substation and solar PV array. The cabling between the existing substation and the offshore windfarm crosses the Proposed Development Site in places.
- 2.3.3. The London Array Windfarm onshore substation was designed to include six transformers. Together with the new NGET substation and switch house, these were to facilitate the transfer of electricity generated at the offshore windfarm into the NETS via the 400kV Canterbury to Kemsley line that crosses the Proposed Development Site on lattice tower pylons.
- 2.3.4. The windfarm itself was originally intended to comprise two phases, with 630MW in phase 1 and 370MW in phase 2, but as a result of emerging offshore environmental constraints the second phase was abandoned. In February 2014, London Array requested The Crown Estate to terminate the lease agreement for phase 2 and cancelled the remaining grid capacity reserved at the NGET substation. It is this spare capacity that the Proposed Development aims to utilise.

⁵ Planning Act 2008: Guidance for the examination of applications for development consent. DCLG (2015)

⁶ Correspondence from Bob Neill MP, Parliamentary Under Secretary of State to Sir Michael Pitt, Chair, Infrastructure Planning Commission. DCLG (28 November 2011)

- 2.3.5. Phase 1 has been built and is connected to the NGET Cleve Hill substation and switch house. Phase 1 has been producing electricity since October 2012.

Canterbury City Council

- 2.3.6. There is no relevant planning history in respect of Canterbury City Council's jurisdiction.

Kent County Council

- 2.3.7. The Proposed Development affects two Mineral Safeguarding Areas that are protected under policy CSM5 of the adopted Kent Minerals and Waste Local Plan 2013-30. The safeguarded minerals are sub-alluvial river terrace deposits and brickearth (Faversham – Sittingbourne Area).
- 2.3.8. In its LIR [REP1-004], Kent County Council requested the submission of a minerals assessment by the Applicant to assess the safeguarding issues relating to economic geologies and the Proposed Development's impact. An agreement on this matter was provided to the Examination in a signed SoCG at Deadline 7 [REP7-029].

3. LEGAL AND POLICY CONTEXT

3.1. INTRODUCTION

- 3.1.1. This chapter sets out the relevant and legal policy context for the Application which was considered and applied by the Examining Authority (ExA) in carrying out its Examination and making its findings and recommendations to the Secretary of State (SoS).
- 3.1.2. Findings, reasoning and conclusions are set out on the relevance of different elements of the policy framework and include the identification of 'important and relevant' matters in accordance with the Planning Act 2008, as amended (PA2008).
- 3.1.3. The Applicant has set out the policies that it considers relevant in the Planning Statement [APP-254] and the Environmental Statement (ES) [APP-036] and in responses to the Local Impact Reports (LIRs) [REP2-033], [REP2-034] and [REP2-035] and our two sets of Written Questions [REP2-006] and [REP4-020].
- 3.1.4. The LIRs and other Written Representations (WRs) of Swale Borough Council, Canterbury City Council and Kent County Council signpost the relevant documents that comprise the respective development plans for those districts and the policies that they believe are relevant to local impacts.

3.2. PLANNING ACT 2008

- 3.2.1. The PA2008 is the principal legislation governing the Examination of an application for a Nationally Significant Infrastructure Project (NSIP) and the decision whether to grant development consent. As set out in paragraphs 1.1.5 and 2.1.19 to 2.1.21 above, the Proposed Development consists of two elements, namely a solar photovoltaic (PV) generating station with an output in excess of 50 megawatts (MW) and an energy storage facility with a gross storage capacity of more than 50MW. Each of these comprises a NSIP to which sections (s)14(1)(a) and s15(2) of the PA2008 apply. In addition, the draft DCO (dDCO) seeks flexibility to substitute additional solar PV arrays for the energy storage element. In this event, the additional arrays would form an extension to a generating station (or comprise a single enlarged generating station) to which s14(1)(a) and s15(2) of the PA2008 apply.
- 3.2.2. Section 104(1) of the PA2008 applies if '*a NPS has effect in relation to development of the description to which the application relates*' (a 'relevant National Policy Statement'). In such a case, the SoS would have to determine an application in accordance with the relevant National Policy Statement (NPS), subject to where specific exceptions apply (s104(3)).
- 3.2.3. Where s104 does not apply, an application falls to be decided under s105 of the PA2008. Section 105(2) requires the SoS to have regard to:

- any LIR (within the meaning given by the PA2008 s60(3)) submitted to the SoS before the specified deadline for submission;
- any matters prescribed in relation to development of the description to which the application relates; and
- any other matters which the SoS thinks are both important and relevant to the decision.

3.2.4. The PA2008 s10 also places a statutory sustainable development duty on the SoS. The duty makes specific reference to the SoS having regard to the desirability of:

- mitigating and adapting to climate change; and
- achieving good design.

3.2.5. Although NPSs do not have direct effect in relation to the Proposed Development, we identify aspects of two NPSs, below and in subsequent chapters, which we consider to be both important and relevant to the decision on this Application.

3.2.6. In January 2019 the SoS launched a consultation on the threshold for battery storage under the PA2008. The SoS issued an update in October 2019 with draft regulations to remove standalone battery storage from the PA2008 which was due to close in December 2019, after the close of examination. The regulations were therefore still in draft and so the existing threshold remained. Battery storage which is associated development can also be considered as part of another energy generation DCO.

3.2.7. This report sets out our findings, conclusions and recommendations taking these matters fully into account and applying the PA2008. Our conclusions regarding s104 and s105 of the PA2008 are set out in paragraph 3.3.18 below.

3.3. NATIONAL POLICY STATEMENTS FOR ENERGY INFRASTRUCTURE

Background

3.3.1. NPS EN-1 (the Overarching National Policy Statement for Energy) was published in July 2011. It sets out the UK Government's commitment to increasing renewable generation capacity and recognises that, in the short to medium term, much of the new capacity is likely to come from onshore and offshore wind. At paragraph 3.3.11, the NPS notes the intermittency of some renewable technologies such as wind, solar and tidal. Paragraph 3.3.12 states that '*there are a number of other technologies which can be used to compensate for the intermittency of renewable generation, such as electricity storage*', and that '*these technologies will play important roles in a low carbon electricity system*'. Paragraph 3.3.31 recognises that electrical energy storage allows energy production to be decoupled from its supply and provides a contribution to meeting peak demand.

- 3.3.2. NPS EN-1 notes that, in conjunction with the relevant technology-specific NPS, it will be the primary basis for decision-making for onshore generating stations generating more than 50MW (paragraph 1.4.2). This includes fossil fuel, wind, biomass, waste or nuclear electricity generating stations.
- 3.3.3. However, this Application is for a ground-mounted solar PV generating station with a gross electrical output capacity of more than 50 megawatts (MW) and an energy storage facility with a gross storage capacity of more than 50MW, and NPS EN-1, at paragraph 1.4.5, excludes the generation of electricity from renewable sources other than wind, biomass or waste from its scope.
- 3.3.4. NPS EN-3 (the National Policy Statement for Renewable Energy Infrastructure) does not include solar power or electricity storage within its scope. It lists the technologies to which it does apply at paragraph 1.8.8: these are energy from biomass or waste, offshore wind, and onshore wind. Moreover, NPS EN-3 makes clear that the policies within it are additional to those on generic impacts set out in NPS EN-1. In this regard it does not cover the technology-specific impacts of solar PV.
- 3.3.5. NPS EN-3 suggests that, at the time of designation in 2011, other types of onshore renewable energy generation were not technically viable at a scale of more than 50MW, and that the Government would consider revisions to NPS EN-3 or separate NPSs to cover such technologies should the situation change. Solar PV technology has advanced to a larger scale; however, no relevant updates had been produced by the close of Examination. As such, for the purposes of the Examination, NPS EN-3 is not considered 'relevant and important'.
- 3.3.6. NPS EN-5 (the National Policy Statement for Electricity Networks Infrastructure) principally focuses on long distance transmission and distribution systems with a nominal voltage of at least 132kV and associated infrastructure. Nevertheless, paragraph 1.8.2 notes that it can also cover development that '*constitutes associated development for which consent is sought along with an NSIP such as a generating station or relevant overhead line*'.

Matters Raised in the Application and During the Examination

- 3.3.7. The Applicant assessed the Proposed Development against NPSs in section 3.3.1 of the Planning Statement [APP-254] and Chapter 6 of the ES [APP-036]. The Applicant's assessment acknowledged that '*there is no NPS which provides specific policy in relation to solar photovoltaic (PV) and energy storage development*' ([APP-254], paragraph 59) but concluded that the principle of the Proposed Development fully complied with the provisions of NPS EN-1.
- 3.3.8. The Applicant's Planning Statement [APP-254] also examined the applicability of NPS EN-3. It noted that NPS EN-3 did not include solar PV developments or battery storage as the Government did not consider

these forms of technology to be viable over 50MW at the time of designation. Nonetheless, the Applicant considered the Proposed Development to comply in principle with NPS EN-3, as it would *'contribute to the Government's objective for transition to a low carbon economy and increasing the energy generation from large scale renewable energy infrastructure'*.

- 3.3.9. In relation to NPS EN-5, the Applicant's Planning Statement [APP-254] noted that, while it principally covers above-ground electricity lines of 132kV, paragraph 1.8.2 confirms that EN-5 is also relevant if the electricity network constitutes an associated development for which consent is sought, such as a generating station. As the Development would incorporate a new substation and underground 400kV connection to the existing Cleve Hill substation, the Applicant concluded that NPS EN-5 should apply.
- 3.3.10. Our Written Questions (ExQ1) [PD-004] included a question (ExQ1.0.8) to all Interested Parties (IPs) setting out our view on the applicability of the NPSs, inviting comments on this and the policy framework generally. In addition to the Applicant's response [REP2-006], which re-confirmed its position as detailed within the Planning Statement [APP-254], six further responses were received. These were from Swale Borough Council [REP2-056], Canterbury City Council [REP2-048], Kent County Council [REP2-053], The Faversham Society [REP2-111], the Ely Family [REP2-106] and Mr King [REP2-112].
- 3.3.11. Canterbury City Council confirmed in its response [REP2-048] that, although not dealing specifically with solar power technology, NPS EN-1, NPS EN-3 and NPS EN-5 were of relevance to the determination of the Application.
- 3.3.12. In their responses [REP2-053] and [REP2-056], Kent County Council and Swale Borough Council considered NPS EN-1 to be outdated. However, both noted that EN-1 also contained useful sections on the generic impact of energy schemes which would be pertinent to the determination of the Application.
- 3.3.13. Swale Borough Council [REP2-056] also stated that as no NPSs exist specifically for solar power or battery storage, *'local plan policy must be given greater weight than might otherwise be the case in an NSIP examination'*.
- 3.3.14. The responses from the Ely Family [REP2-106] and Mr King [REP2-112] indicated that, given the lack of a specific NPS, local plan policy should be referred to. In addition, The Faversham Society [REP2-111] stated that *'not only is there a lack of NPS guidance to determine the CHSP proposal, it is inappropriate to consider at this time an application of this unprecedented scale and with still emerging technology'*.
- 3.3.15. LIRs were submitted by Swale Borough Council [REP1-005], Canterbury City Council [REP1-002] and Kent County Council [REP1-004]. The

purpose and content of the LIRs is discussed in section 3.11 of this chapter and Chapter 4 of this Report.

- 3.3.16. In its LIR, Swale Borough Council [REP1-005], acknowledged that NPS EN-1 had general relevance and was supportive of the principle behind the Application but that neither NPS EN-3 nor NPS EN-5 were considered relevant. In its LIR, Canterbury City Council [REP1-002] identified paragraphs 4.5.1 and 5.9.5 of NPS EN-1 as having relevance to the Application regarding landscape and visual impact. No reference to national planning policy was made by Kent County Council in its LIR [REP1-004].
- 3.3.17. The applicability of the NPSs and the relevant policy framework was also discussed during ISH1 on Need [EV-016].

Conclusion on NPSs

- 3.3.18. Having considered the above, we are of the view that there is no NPS in place for this type of development that accords with s104 of the PA2008. The Application therefore falls to be decided under s105 of the PA2008. The criteria to which the SoS must have regard in deciding this Application includes s105(2)(c) *'any other matters to which the Secretary of State thinks are both important and relevant to [his] decision'*.
- 3.3.19. In this specific case, we consider that NPS EN-1 is 'important and relevant' to the decision on this Application because:
- the Proposed Development is a generating station with a capacity of more than 50MW and the policies in NPS EN-1 are devised specifically for generating stations and energy infrastructure of this scale; and
 - NPS EN-1 contains paragraphs that emphasise the national need for electricity and electricity infrastructure, including electricity storage - battery storage can contribute to consistency of electricity supply, particularly in the context of an increasing reliance on intermittent renewables.
- 3.3.20. We also consider NPS EN-5 to be 'important and relevant' to a very limited part of the Proposed Development, that being the new substation and underground 400kV connection to the existing Cleve Hill substation.
- 3.3.21. We do not consider any of the other Energy Infrastructure NPSs, including NPS EN-3, to be 'important and relevant' to the determination of this Application. Photovoltaics and battery storage were not considered in the appraisal of sustainability for NPS EN-3.

3.4. MARINE AND COASTAL ACCESS ACT 2009

- 3.4.1. The Marine and Coastal Access Act 2009 (MACAA2009) introduced the production of marine plans and the designation of Marine Conservation Zones (MCZ) in United Kingdom waters. MACAA2009 provides for the preparation of the Marine Policy Statement (MPS) and Inshore and Offshore Marine Plans. The PA2008 (s105) does not make explicit reference to the need for the SoS to have regard to the appropriate

marine policy documents. Nevertheless, s105 subsection 2(c), requires the SoS to have regard to *'any other matters which the Secretary of State thinks are both important and relevant to the Secretary of State's decision'*. In this instance, the relevant policies for the purposes of s59 are the MPS and any marine plan adopted by the relevant SoS within the policy framework set by the MPS.

- 3.4.2. In 2013, the SoS for Environment, Food and Rural Affairs designated 27 MCZs. The Swale Estuary MCZ is one of these, and the relevant implications of the Proposed Development are addressed in Chapter 7.

3.5. UK LEGISLATION AND POLICY

The Town and Country Planning Act 1990 (as amended)

- 3.5.1. The Town and Country Planning Act 1990 (as amended) (TCPA1990) regularises the development of land in England and Wales and includes an expansive code of planning regulations.

The Highways Act 1980

- 3.5.2. The Highways Act 1980 deals specifically with the management and operation of the road network in England and Wales.

The Environment Act 1995

- 3.5.3. The Environment Act 1995, which applies to England, Scotland and Wales, is a wide-ranging piece of legislation and sets standards for environmental management.

Environmental Protection Act 1990

- 3.5.4. S79(1) of the Environmental Protection Act 1990 identifies several matters which are considered to be statutory nuisance.

Environmental permitting and related policy

- 3.5.5. Development proposals that could pollute air, water or land, increase flood risk or adversely affect land drainage may need an Environmental Permit from the Environment Agency under the Environmental Permitting (England and Wales) Regulations 2016.

Noise Policy Statement for England

- 3.5.6. The Noise Policy Statement for England (NPSE) seeks to clarify the underlying principles and aims in existing policy documents, legislation and guidance that relate to noise. The NPSE applies to all forms of noise, including environmental noise, neighbour noise and neighbourhood noise. The Statement sets out the long-term vision of the Government's noise policy, which is to *'promote good health and a good quality of life through the effective management of noise within the context of policy on sustainable development'*.
- 3.5.7. The Explanatory Note within the NPSE provides further guidance on defining 'significant adverse effects' and 'adverse effects.' One such

concept identifies the Lowest Observable Adverse Effect Level (LOAEL), which is defined as the level above which adverse effects on health and quality of life can be detected. Other concepts identified are: Significant Observed Adverse Effect Level (SOAEL), which is the level above which significant adverse effects on health and quality of life occur; and, No Observed Effect Level (NOEL), which is the level below which no effect can be detected. Below this level no detectable effect on health and quality of life due to noise can be established.

- 3.5.8. When assessing the effects of a proposed development on the noise environment, the aim should be to avoid noise levels above the SOAEL, and to take all reasonable steps to mitigate and minimise noise effects where development noise levels are between LOAEL and SOAEL.

Planning Practice Guidance – Noise 2019

- 3.5.9. This guidance provides advice on how planning can manage potential noise effects in a new development. In terms of how to recognise when noise could be a concern, the guidance provides a table outlining perception, outcomes, effect level and action required.

Water Resources Act 1991, Flood and Water Management Act 2010, Water Act 2003 and 2014, Land Drainage Act 1991

- 3.5.10. These Acts set out the relevant regulatory controls that provide protection to waterbodies and water resources from abstraction pressures, discharge and pollution, and for drainage management related to non-main rivers. The Application is considered against such matters in Chapter 8 of this Report.

The UK Biodiversity Action Plan

- 3.5.11. Priority habitats and species are listed in the UK Biodiversity Action Plan. This was taken into account in our Examination, with biodiversity and ecological considerations discussed in Chapter 7 of this Report.

Climate Change

- 3.5.12. The PA2008 s10(3)(a) requires the SoS to have regard to the desirability of mitigating, and adapting to, climate change in designating an NPS. We have had regard to these objectives throughout this Report, notably in Chapters 5 and 6. The Climate Change Act 2008 also establishes statutory climate change projections and carbon budgets. The target for carbon emissions was initially set at 80% of the 1990 baseline figure by 2050. This was amended to 100% net zero by section 2 of the Climate Change Act 2008 (2050 Target Amendment) Order SI 1056 in July 2019. The UK projections are published every ten years and the latest set are UKCP19. These are discussed further in the relevant chapters below.

The Public Sector Equality Duty

- 3.5.13. The Equalities Act 2010 established a duty (the Public Sector Equality Duty (PSED)) to eliminate discrimination, advance equality of opportunity and foster good relations between persons who share a protected

characteristic and persons who do not. The PSED is applicable to the ExA in the conduct of this Examination and reporting and to the SoS in decision-making.

3.6. OTHER LEGAL PROVISIONS

The Infrastructure Planning (Decisions) Regulations 2010

3.6.1. The 'Decisions Regulations' contain provisions in respect of the treatment of listed buildings, conservation areas and scheduled monuments and of biodiversity.

3.6.2. Regulation 3 of the Decisions Regulations provides that:

'(1) When deciding an application which affects a listed building or its setting, the decision-maker must have regard to the desirability of preserving the listed building or its setting or any features of special architectural or historic interest that it possesses.

(2) When deciding an application relating to a conservation area, the decision-maker must have regard to the desirability of preserving or enhancing the character or appearance of that area.

(3) when deciding an application for development consent which affects or is likely to affect a scheduled monument or its setting, the decision-maker must have regard to the desirability of preserving the scheduled monument or its setting.'

3.6.3. In respect of biological diversity, Regulation 7 requires regard to the United Nations Environmental Programme Convention on Biological Diversity of 1992.

The Wildlife and Countryside Act 1981

3.6.4. The Wildlife and Countryside Act 1981 (WACA1981) is the primary legislation that protects certain habitats and species in the UK. It provides for and protects wildlife, nature conservation, countryside protection, National Parks, and Public Rights of Way (PRoWs) including the notification, confirmation, protection and management of Sites of Special Scientific Interest (SSSIs). These sites are identified for their flora, fauna, geological or physiographical features by the statutory nature conservation bodies (SNCBs) in the UK. The SNCB for England is Natural England.

3.6.5. WACA1981 contains provisions relevant to Ramsar sites, National Nature Reserves and Marine Nature Reserves. If a species protected under the Act is likely to be affected by a development, a protected species licence will be required from Natural England. Sites protected under the Act (including SSSIs) that are affected by a proposed development must also be considered. The effects of development on the PRoW network are also relevant.

WACA1981 is relevant to the Application in view of the sites and species identified in the ES. Relevant considerations are discussed in Chapter 7 of this Report.

Natural Environment and Rural Communities Act 2006

- 3.6.6. The Natural Environment and Rural Communities Act 2006 (as amended) (the NERC Act) makes provision for bodies concerned with the natural environment and rural communities, including in connection with wildlife sites and SSSIs. It includes a duty that every public body must, in exercising its functions, have regard, so far as is consistent with the proper exercising of those functions, to the purpose of biodiversity. In complying with the biodiversity duty, regard must be had to the United Nations Environment Programme Convention on Biological Diversity.
- 3.6.7. We have had regard to the NERC Act and the biodiversity duty in all relevant sections of this Report.

National Parks and Access to the Countryside Act 1949

- 3.6.8. The National Parks and Access to the Countryside Act 1949 provides the framework for the establishment of National Parks and Areas of Outstanding Natural Beauty (AONBs). It also establishes powers to declare National Nature Reserves and for local authorities to establish Local Nature Reserves.

The Countryside and Rights of Way Act 2000

- 3.6.9. The Countryside and Rights of Way Act 2000 (as amended) includes provisions in respect of PRoW and access to land. The Act brought in improved provisions for the protection and management of SSSIs and other designations under the Wildlife and Countryside Act 1981.

The Planning (Listed Buildings and Conservation Areas) Act 1990

- 3.6.10. The Planning (Listed Buildings and Conservation Areas) Act (LBCA Act) empowers the SoS to maintain a list of built structures of historic or architectural importance and sets out the principal statutory provisions that must be considered in the determination of any application affecting listed buildings and conservation areas.
- 3.6.11. As required by Regulation 3 of the Infrastructure Planning (Decisions) Regulations 2010, we have had regard to the desirability of preserving any listed building or its setting or any features of special architectural or historic interest which it possesses as set out in Chapter 8. Similarly, we have also had regard to the desirability of preserving or enhancing the character or appearance of any conservation area.

Ancient Monuments and Archaeological Areas Act 1979

- 3.6.12. The Ancient Monuments and Archaeological Areas Act provides for scheduled monuments to be protected and for the maintenance of a list of scheduled monuments. It also imposes a requirement to obtain Scheduled Monument Consent for any works of demolition, repair, and

alteration that might affect a designated scheduled monument. For non-designated archaeological assets, protection is afforded through the development management process as established both by TCPA1990 and the National Planning Policy Framework (NPPF).

Control of Pollution Act 1974

- 3.6.13. The Control of Pollution Act 1974 (CoPA) provides the main legislation regarding demolition and construction site noise and vibration. If noise complaints are received, a section (s)60 notice may be issued by the local authority with instructions to cease work until specific conditions to reduce noise have been adopted. Section 61 of the CoPA provides a means for applying for prior consent to carry out noise-generating activities during construction. Once prior consent has been agreed under s61, a s60 notice cannot be served provided the agreed conditions are maintained on site. The legislation requires 'Best Practicable Means' be adopted for construction noise on any given site.

3.7. EUROPEAN LAW AND RELATED UK REGULATIONS

Leaving the European Union

- 3.7.1. The UK left the European Union as a member state on 31 January 2020 after the close of the Examination. The European Union (Withdrawal Agreement) Act of January 2020 gives effect to the transition arrangements until 31 December 2020. This provides for EU law to be retained as UK law and also to bring into effect obligations which may come into force during the transition period.
- 3.7.2. This Report has been prepared on the basis of retained law and references in it to European terms such as 'Habitats Directive' have also been retained for consistency with the Examination documents. It will be for the SoS to consider the position on retained law and obligations at the point of the decision.

The EIA Directive

- 3.7.3. Council Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (as amended) (the EIA Directive) defines the procedure by which information about the environmental effects of a project is collated and taken into account by the relevant decision maker before consent is granted for a development. It applies to a wide range of defined public and private projects.
- 3.7.4. The Proposed Development falls to be considered under the UK legislation related to 2011/92/EU. The Directive is transposed into domestic law by The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations).

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

- 3.7.5. The Proposed Development falls within Schedule 2 paragraph 3(a) of the EIA Regulations. The location, scale and nature of the Proposed

Development may have the potential to give rise to significant effects on the environment and is considered to be EIA development. The DCO Application is therefore required to be accompanied by an Environmental Statement (ES) prepared in accordance with the EIA Regulations. The Applicant has provided an ES as part of the submitted Application [APP-030-250].

The Birds Directive

- 3.7.6. Council Directive 2009/147/EC on the conservation of wild birds (the Birds Directive) is a European nature conservation legislative measure for the protection for all wild bird species naturally occurring in the European Union. The Directive places great emphasis on the protection of habitats for endangered as well as migratory species. It requires classification of areas as Special Protection Areas (SPAs) comprising the most suitable territories for these species. Since 1994, all SPAs form an integral part of the Natura 2000 ecological network.

The Habitats Directive

- 3.7.7. Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive) is a European nature conservation legislative measure.
- 3.7.8. Habitat types requiring the designation of Special Areas of Conservation (SACs) are listed in Annex I of the Directive. Animal and plant species of interest whose conservation requires the designation of SACs are listed in Annex II. SACs form part of the Natura 2000 network of protected sites. Annex IV lists animal and plants species of interest in need of legal protection. Species listed in these annexes are identified as 'European Protected Species'.

The Habitats Regulations

- 3.7.9. The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations) are the principal means by which the Habitats Directive and the Birds Directive are transposed into the law of England and Wales. Assessment processes taking place pursuant to these Regulations are referred to as Habitats Regulations Assessments (HRAs).
- 3.7.10. While Chapter 9 sets out full details, the types of protected site relevant to this process are principally as follows:
- SACs designated pursuant to the Habitats Directive;
 - SPAs designated pursuant to the Birds Directive; and
 - Ramsar sites designated under the Ramsar Convention on Wetlands of International Importance.
- 3.7.11. These Directives and Regulations are relevant to this Application in view of the presence of European sites adjacent to the Proposed Development Site.

The Water Framework Directive

- 3.7.12. Council Directive 2000/60/EC (as amended) establishing a framework for Community action in the field of water policy (the Water Framework Directive (the WFD)) creates a framework for water policy to manage the quality of receiving waters. Amongst other objectives, it seeks to prevent the deterioration of, and to improve, aquatic ecosystems by progressively reducing pollution and mitigating the effects of floods.
- 3.7.13. In relation to the WFD, NPS EN-1 states at paragraph 5.15.3 that an ES should describe existing physical characteristics of the water environment affected by the proposed project and any impact of physical modifications to these characteristics. It should also address any impacts of the proposed project on water bodies or areas protected under the WFD.
- 3.7.14. The WFD is transposed into law in England and Wales by The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017. This matter is addressed in the relevant section of Chapter 8.

3.8. MADE DEVELOPMENT CONSENT ORDERS

- 3.8.1. In its Explanatory Memorandum [APP-018], Response to the Examining Authority's Written Questions [REP2-006], Written Summary of the First dDCO Issue Specific Hearing (ISH) [REP3-015] and Written Submission on Arbitration [REP4-046], the Applicant made reference to the following made Orders to support its position:
- The Hinkley Point C (Nuclear Generating Station) Order 2013;
 - The Triton Knoll Offshore Wind Farm Order 2013;
 - The Burbo Bank Extension Offshore Wind Farm Order 2014;
 - The Hornsea One Offshore Wind Farm Order 2014;
 - The Walney Extension Offshore Wind Farm Order 2014;
 - The A160/A180 (Port of Immingham Improvement) Development Consent Order 2015;
 - The Dogger Bank Creyke Beck Order 2015;
 - The Dogger Bank Teesside A and B Offshore Wind Farm Order 2015;
 - The Hirwaun Generating Station Order 2015;
 - The Swansea Bay Tidal Generating Station Order 2015;
 - The Hornsea Two Offshore Wind Farm Order 2016;
 - The M4 Motorway (Junctions 3 to 12) (Smart Motorway) Development Consent Order 2016;
 - The North Wales Wind Farms Connection Order 2016;
 - The East Anglia Three Offshore Wind Farm Order 2017;
 - The Glyn Rhonwy Pumped Storage Generating Station Order 2017;
 - The M20 Junction 10a Development Consent Order 2017;
 - The Wrexham Gas Fired Generating Station Order 2017;
 - The A19/A184 Testo's Junction Alteration Development Consent Order 2018;
 - The Eggborough Gas Fired Generating Station Order 2018;
 - The Silvertown Tunnel Order 2018;
 - The Millbrook Power (Gas Fired Power Station) Order 2019; and
 - The Port of Tilbury (Expansion) Order 2019.

- 3.8.2. The Applicant also made reference to The High Speed Rail (London – West Midlands) Act 2017.
- 3.8.3. In addition, the Applicant referred to the following additional DCO applications awaiting determination by the SoS following the submission of the ExAs' recommendation reports:
- The Hornsea Three Offshore Wind Farm dDCO;
 - The Norfolk Vanguard Offshore Wind Farm dDCO; and
 - The Thanet Extension Offshore Wind Farm dDCO.
- 3.8.4. The Applicant also made reference to the Norfolk Boreas dDCO which is currently in examination.
- 3.8.5. We made reference to The A19/A184 Testo's Junction Alteration Development Consent Order 2018 in relation to the drafting of the DCO, and to The Drax Power (Generating Stations) Order 2019 in relation to an approach to the case for need, the status of NPS EN-1 and the applicability of the PA2008 to battery storage technologies.
- 3.8.6. We also made reference to the Kemsley Paper Mill K4 Combined Heat and Power Generating Station Order 2019 in relation to marsh harriers and the HRA. We also made reference to the application for the Wheelabrator Kemsley (K3 Generating Station) and Wheelabrator Kemsley North Waste to Energy Facility DCO in relation to marsh harriers and the HRA. This was still in Examination at the time of completing this Report.

3.9. OTHER RELEVANT POLICY REFERENCES

- 3.9.1. Listed below is the wider policy context considered during the Examination:
- HM Government
 - UK Solar PV Strategy Part 1: Roadmap to a Brighter Future (DECC 2013);
 - UK Solar PV Strategy Part 2: Delivering a Brighter Future (DECC 2014);
 - The Clean Growth Strategy: Leading the way to a low carbon future (October 2017);
 - A Green Future: Our 25 Year Plan to Improve the Environment (2018); and
 - Leading on Clean Growth – The Government Response to the Committee on Climate Change's 2019 Progress Report to Parliament – Reducing UK emissions (October 2019).
 - Committee on Climate Change
 - Meeting Carbon Budgets: Closing the policy gap 2017 Report to Parliament – June 2017;
 - Net Zero The UK's contribution to stopping global warming – May 2019; and

Reducing UK emissions 2019 Progress Report to Parliament – July 2019.

- Intergovernmental Panel on Climate Change
 - Special Report on Global Warming of 1.5°C.
- Kent County Council
 - Fourth Local Transport Plan Growth without Gridlock 2016-2031;
 - Kent and Medway Growth and Infrastructure Framework 2018;
 - Renewable Energy for Kent: An Action Plan for Delivering Opportunities 2013-2018; and
 - Kent County Council Rights of Way Improvement Plan.
- Swale Borough Council
 - Renewable Energy Planning Guidance Note 2014.
- British Standards Institution
 - BS 5228:2009 Code of Practice for Noise and Vibration Control on Construction and Open Sites; and
 - BS 4142:2014 Methods for Rating and Assessing Industrial and Commercial Sound.

3.10. THE NATIONAL PLANNING POLICY FRAMEWORK (NPPF)

- 3.10.1. The revised NPPF published in February 2019 and its accompanying Planning Practice Guidance (PPG) set out the Government's planning policies for England and how these are expected to be applied. This is for the particular purpose of making development plans and deciding applications for planning permission and related determinations under TCPA1990.
- 3.10.2. At the time the Application was prepared and submitted, the 2018 NPPF was in force. Following a review, the NPPF was subsequently updated in February 2019. During our first round of Written Questions, the Applicant was requested to check the Application material and to make any revisions necessary in light of the 2019 update [PD-004]. In response [REP2-006], the Applicant advised that no revisions were necessary.

3.11. LOCAL IMPACT REPORTS

- 3.11.1. Section 104 and s105 of the PA2008 state that in deciding an application the SoS must have regard to any Local Impact Report (LIR) within the meaning of s60(3) of the PA2008. A LIR is a report made by a relevant local authority giving details of the likely impact of a proposed development on the authority's area (or any part of that area) that had been invited and submitted to the ExA under s60 of the PA2008.
- 3.11.2. Our Rule 6 letter [PD-003] contained a formal request under s60(2) of the PA2008 to eligible local authorities to submit LIRs. Three LIRs have been submitted in accordance with s60(3), from Swale Borough Council

[REP1-005], Canterbury City Council [REP1-002] and Kent County Council [REP1-004].

The LIRs set out the principal local planning policies and other policies relevant to the Proposed Development and provided commentary on the consideration of local impacts.

3.12. THE DEVELOPMENT PLAN

3.12.1. The legal requirement under s38 (6) of the Planning and Compulsory Purchase Act 2004 to determine applications for development consent in accordance with development plan documents does not apply to applications under the PA2008.

3.12.2. However, in the case of this Application we agree with the Applicant that the development plan is important and relevant. NPS EN-1 paragraph 4.1.5 also confirms that policies in development plan documents and other Local Development Framework documents may be considered important and relevant in planning decision making. However, in the event of a conflict, paragraph 4.1.5 states that the NPSs prevail for the purpose of decision making by the SoS. The development plan is therefore a material consideration for the SoS and has accordingly been considered as part of the policy context for the Proposed Development.

3.12.3. Our Written Questions [PD-004] included a question (ExQ1.0.2) that asked the local planning authorities if they were content with the summary of local planning policies set out in Chapter 6 of the ES [APP-036] and the analysis of local planning policies at Appendix A of the Planning Statement [APP-254]. In their responses to the Written Questions, Canterbury City Council [REP2-048], Kent County Council [REP2-053] and Swale Borough Council [REP2-056] stated that some policies had been excluded from the relevant section in the ES. All three Councils provided a list of additional policies considered relevant to the Proposed Development.

3.12.4. The relevant development plan comprises of:

- Bearing Fruits 2031: The Swale Borough Local Plan, adopted July 2017 (The Swale Borough Local Plan);
- Kent Minerals and Waste Local Plan 2013-2030, adopted July 2016; and
- Canterbury District Local Plan adopted July 2017.

3.12.5. The relevant planning policies within The Swale Borough Local Plan include:

- Policy ST 1 – Delivering Sustainable Development in Swale;
- Policy ST 7 – The Faversham Area and Kent Downs Strategy;
- Policy CP 1 – Building a strong, competitive economy;
- Policy CP 2 – Promoting sustainable transport;
- Policy CP 4 – Requiring Good Design;
- Policy CP 5 – Health and wellbeing;

- Policy CP 7 – Conserving and enhancing the natural environment – providing for green infrastructure;
- Policy CP 8 – Conserving and enhancing the historic environment;
- Policy DM 3 – Rural Economy;
- Policy DM 6 – Managing transport demand and impact;
- Policy DM 14 – General Development Criteria;
- Policy DM 19 – Sustainable Design and Construction;
- Policy DM 20 – Renewable and Low Carbon Energy;
- Policy DM 21 – Water, Flooding and Drainage;
- Policy DM 22 – The Coast;
- Policy DM 23 – Coastal Change Management;
- Policy DM 24 – Conserving and Enhancing Valued Landscapes;
- Policy DM 26 – Rural Lanes;
- Policy DM 28 – Biodiversity and Geological Conservation;
- Policy DM 29 – Woodland, Trees and Hedges;
- Policy DM 30 – Enabling development for landscape and biodiversity enhancement;
- Policy DM 31 – Agricultural Land;
- Policy DM 32 – Development involving listed buildings;
- Policy DM 33 – Development affecting a conservation area; and
- Policy DM 34 – Scheduled Monuments and archaeological sites.

3.12.6. The relevant planning policies within the Kent Minerals and Waste Local Plan include:

- Policy DM 7 – Safeguarding Mineral Resources; and
- Policy DM 8 – Safeguarding Mineral Management, Transportation, Production & Waste Management Facilities.

3.12.7. The relevant planning policies within the Canterbury District Local Plan include:

- Policy SP1 – Sustainable Development;
- Policy SP6 – Strategic Access Management and Monitoring (SAMM) Mitigation Measures for the coastal Special Protections Areas and Ramsar sites;
- Policy EMP12 – Agricultural Land;
- Policy T1 –Transport Strategy;
- Policy T16 – Rural Lanes;
- Policy CC1 – Renewable and Low Carbon Energy Production (apart from wind energy development);
- Policy CC4 – Flood Risk;
- Policy CC5 – Flood Zones;
- Policy CC11 – Sustainable Drainage Systems;
- Policy DBE2 – Renewable Energy;
- Policy DBE3 – Principles of Design;
- Policy DBE9 – Outdoor Lighting;
- Policy HE1 – Historic Environment and Heritage Assets;
- Policy HE6 – Conservation Areas;
- Policy HE8 – Heritage Assets in Conservation Areas;
- Policy HE12 – Area of Archaeological Interest;
- Policy LB2 – Areas of High Landscape Value;
- Policy LB3 – Undeveloped Coast;

- Policy LB4 – Landscape Character Areas;
- Policy LB5 – Sites of International Conservation Importance;
- Policy LB6 – Sites of Special Scientific Interest;
- Policy LB7 – Locally Designated Sites;
- Policy LB8 – Landscape Scale Biodiversity Networks;
- Policy LB9 – Protection, Mitigation, Enhancement and Increased Connectivity for Species and Habitats of Principal Importance;
- Policy LB10 – Trees, Hedgerows and Woodland;
- Policy LB12 – Seasalter;
- Policy LB13 – River Corridors;
- Policy QL11 – Air Quality; and
- Policy QL12 – Potentially Polluting Development.

3.13. TRANSBOUNDARY EFFECTS

- 3.13.1. Under Regulation 32 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, and based on the information available from the Applicant, the Planning Inspectorate on behalf of the SoS expressed the view that the Proposed Development is not likely to have a significant effect on the environment in another European Economic Area State [OD-001].
- 3.13.2. In reaching this view, the SoS has applied the precautionary approach (as explained in PINS Advice Note 12 Transboundary Impacts Consultation). Transboundary issues consultation under Regulation 32 of the EIA Regulations was therefore not considered necessary. The ExA agrees with the SoS's conclusion.
- 3.13.3. We are satisfied that, in relation to Regulation 7 of the Infrastructure Planning (Decisions) Regulations 2010, all transboundary biodiversity matters have been addressed and there are no matters outstanding that would indicate against the Recommended DCO being confirmed.

4. THE PLANNING ISSUES

4.1. MAIN ISSUES IN THE EXAMINATION

4.1.1. As required by section (s)88 of the Planning Act (PA2008) and the Infrastructure Planning (Examination Procedure) Rules 2010 (EPR) Rule 5, we made an Initial Assessment of Principal Issues (IAPI) arising from the Application within 21 days of the day after receipt of the s58 Certificate of Compliance [OD-002] (s56 notice) under the PA2008 provided by the Applicant. The issues identified in that initial assessment were as follows.

4.1.2. Biodiversity and nature conservation;

- Age of key ecological surveys and potential need for pre-construction updates
- Impacts on legally protected species and other wildlife
- Impacts of noise disturbance on birds
- Timing of works
- Impacts from habitat loss, including effectiveness of mitigation and enhancement proposals, and the timing, establishment and management of the Arable Reversion Habitat Management Area (AR HMA) for brent goose, lapwing and golden plover in particular
- Proposed mitigation measures, including the Landscape and Biodiversity Management Plan (LBMP) and Habitat Management Areas
- Management, monitoring and any necessary remedial measures for the Habitat Management Areas
- Sufficiency of detail and range of coverage of the outline LBMP and its relationship with the Construction Environmental Management Plan (CEMP) and draft Development Consent Order (dDCO)
- Report to Inform Appropriate Assessment (RIAA) implications for European sites and their qualifying features;

4.1.3. Compulsory Acquisition (CA), Temporary Possession (TP) and other land or rights considerations;

- Nature and extent of land required
- Rights and powers sought through CA
- Need for land proposed to be subject to CA and TP powers
- Statutory undertakers' land
- Whether there is a compelling need in the public interest
- Project funding and guarantees for compensation
- Human rights and consideration of alternatives
- Book of Reference;

4.1.4. Cultural heritage; effects on designated and non-designated heritage assets and their settings;

4.1.5. The draft Development Consent Order (dDCO);

- Consistency between the dDCO and the Explanatory Memorandum
- Definition of 'commencement' and implications for the DCO and Requirements

- Clarification of other relevant definitions
- Proposed procedures involving deadlines for the SoS under draft Article 5
- Draft Deemed Marine Licence, Marine Licence exemption powers and maintenance powers sought for the existing sea defences
- Flexibility between development options for Work No. 2, for the new access track, and for the construction programme
- Whether any consent should be time limited
- Arrangements for decommissioning and restoration
- Protective Provisions, especially for National Grid Electricity Transmission plc (NGET)
- Relationship between any powers that would be authorised through the DCO, the Outline Design Principles and 'Candidate Design' that has been assessed
- Arrangements for the temporary stopping up of Public Rights of Way
- Application and modification of legislative provisions, including the applicability of the relevant provisions of the Neighbourhood Planning Act 2017;

4.1.6. Environmental Statement (ES), general;

- Approaches to the identification of likely significant effects and cumulative effects
- Approach to mitigation and the Mitigation Schedule
- Rochdale Envelope parameters, the Candidate Design and relationship with the powers sought through the dDCO
- Environmental considerations in the evaluation of alternatives
- Interrelationship between aspects
- Assumptions applied in the ES, including whether the Medway Estuary and Swale Strategy (MEASS) proposal for managed realignment at the site should be considered in the description of the future baseline conditions at the site and in the assessment, especially but not limited to ecological and ornithological considerations;

4.1.7. Landscape and visual effects;

- Suitability of study areas and viewpoints used in the Landscape and Visual Impact Assessment
- Interpretation of provided photographs and montages
- Effects during construction
- Scale and context of the development in relation to landscape character
- Effects on amenity and views from the Public Rights of Way network
- Lighting effects at night
- Glint and glare impacts
- Effectiveness of mitigation planting
- The Residential Visual Amenity Assessment;

4.1.8. Noise;

- Identification of sensitive receptors
- Approach to noise assessment
- Identification of noise sources during operation

- Mitigation measures during construction and operation;
- 4.1.9. Socio-economic effects;
- Effects on the living conditions of nearby residents and the amenity of local communities and countryside users, as a whole, during construction and thereafter
 - Effects on the local economy, particularly businesses and tourism, during construction and thereafter
 - Agricultural management and effects on agricultural land;
- 4.1.10. Traffic and transport;
- Effects on communities and other sensitive receptors along the construction HGV delivery route, including noise and air quality
 - Control of delivery HGVs travelling to the construction site following arrivals at the port of entry
 - Mitigation measures including the outline Construction Transport Management Plan (CTMP);
- 4.1.11. Water, flooding and coastal defence;
- Strategic proposals for managed retreat (especially the MEASS)
 - Responsibility for the maintenance of the existing flood defences
 - Relationship with Environmental Permits
 - Flood Risk Assessment (FRA) and climate change allowance, including relationship with life span of the Proposed Development and applicability of new UK Climate Projections (UKCP18)
 - Potential changes in surface and groundwater quality including indirect implications for biodiversity
 - Location, design and maintenance of surface water crossings (including wildlife-related issues)
 - Design of flood protection bunds, including access to the substation
 - Potential impacts on water resources
 - Effectiveness of run-off mitigation proposals, including the timing, establishment and management of the grassed/seeded areas.
- 4.1.12. 'Applicable law and policy' was not identified as a topic in the IAPI, as it must be considered by the ExA at all times. It provided the framework within which the entire Examination was conducted. Section 1 of our Written Questions (ExQ1) [PD-004] and part of the Issue Specific Hearing on 'Need' (ISH1) [EV-006] tested various Interested Parties' (IPs) views on the most appropriate policy framework within which to conduct the Examination and on which to reach a recommendation and decision. The topic is summarised in Chapter 3 of this Report.
- 4.1.13. In addition, whilst the effects of the proposal in relation to human rights and equalities duties and on the achievement of sustainable development including the mitigation of, and adaption to, climate change, were not listed as specific Principal Issues, we conducted all aspects of the Examination with these objectives in mind.
- 4.1.14. The IAPI was provided to all recipients at Annex B to the Rule 6 Letter [PD-003] and was discussed at the Preliminary Meeting (PM) [EV-001].

- 4.1.15. There were discussions at the PM about other possible Principal Issues. We were content that most suggestions were already covered by topics included within the IAPI or were lesser issues that did not require an amendment of the list of IAPI. However, it became apparent through oral and written submissions that there was a significant level of uncertainty and concern amongst the local and wider community in relation to:
- the novelty of such a large-scale battery storage facility;
 - the east-west orientation of the solar arrays;
 - the potential safety hazards associated with battery storage technology; and
 - a perception that alternative sites and solutions had not been adequately addressed.
- 4.1.16. Topics relating to the location of the Proposed Development, the relevance of other sites or solutions, the design of the Proposed Development (including novel aspects) and the Applicant's experience were therefore introduced under the general banner of 'Need' as a further Examination issue. They were thoroughly examined in written questions, responses and representations, and during ISH1 [EV-006].
- 4.1.17. At Open Floor Hearing 2 (OFH2) The Faversham Society raised further concerns about the safety and fire risk of battery storage installations [REP1-037] and subsequently made a written request for us to hold an Issue Specific Hearing (ISH) on the topic [REP3-068]. The Faversham Society made further submissions at Deadline 3 [REP3-069] setting out more detailed concerns and repeating its request for an ISH. It also submitted a summary of the submissions made to OFH2 [REP3-071]. We therefore decided to examine safety and security as part of ISH6 dealing with Environmental Matters [EV-023].
- 4.1.18. The remainder of this chapter introduces the planning issues from the IAPI. The planning issues have then been re-ordered from the alphabetic order in which they are traditionally set down in an IAPI, driven by interplay between the following factors:
- their importance to the ExA's recommendation; and
 - their temporal or contingency relationships with other topics.
- 4.1.19. It follows that the planning issues are dealt with in this Report in the following order:
- meeting energy needs;
 - landscape and visual effects;
 - biodiversity and nature conservation;
 - cultural heritage;
 - agricultural land
 - traffic and transport
 - noise;
 - socio-economic effects;
 - water, flooding and coastal defence;
 - safety; and
 - other important and relevant considerations.

- 4.1.20. We report on CA and other land or rights considerations in Chapter 11. Specific topic matters that relate to the dDCO are reported in subsequent chapters within the framework of the individual planning issues in relation to which they arise. We report on the DCO itself in Chapter 12 of this Report.
- 4.1.21. In addition to introducing the planning issues, this chapter also addresses the following topics arising from the conduct of the Examination as follows:
- issues arising in written and oral submissions;
 - issues arising from the Local Impact Reports (LIRs);
 - conformity with National Policy Statements (NPSs);
 - conformity with the development plan;
 - the application and consideration of other legislation and policies;
 - consideration of previously made DCOs;
 - Environmental Impact Assessment (EIA); and
 - Habitats Regulations Assessment (HRA).
- 4.1.22. Having set out responses to these matters in broad terms in the remainder of this chapter we set out the planning issues identified in paragraphs 4.1.1 to 4.1.11 above and the matters of detail arising from them in Chapters 5 to 9 of this Report.

4.2. ISSUES ARISING FROM SUBMISSIONS

Introduction

- 4.2.1. There was a substantial level of local opposition and community concern in respect of this Application. Objections to the principle and detail of the Proposed Development were expressed in the overwhelming majority of submitted RRs.

Relevant Representations

- 4.2.2. There was a total of 866 RRs. Many of the principal areas of objection and concern expressed by individuals were encapsulated by the representations of bodies and groups. These included, but are not limited to, the Parish Councils of Oare [RR-052] and Graveney with Goodnestone [RR-321], Faversham Town Council [RR-274], Helen Whately MP [RR-418], The Faversham Society [RR-486] and CPRE Kent [RR-751]. In addition, many of the views commonly expressed were also articulated by several representations made by Graveney Rural Environment Action Team (GREAT) [RR-257], [RR-262], [RR-264], [RR-265], [RR-618], [RR-698], [RR-700], [RR-721], [RR-722], [RR-732], [RR-746], [RR-762] and [RR-770].
- 4.2.3. The main concerns that were commonly raised can be characterised as follows:
- no demonstrated need for the Proposed Development;
 - inappropriate scale of the Proposed Development;
 - such schemes should utilise brownfield sites;

- solar PV panels should be on new-build roof tops;
- safety of battery storage solution;
- expertise of the developers;
- concerns regarding the alternative site assessment to demonstrate the best location for such a proposal;
- implications for the local road system, villages and safety from increased traffic;
- concern about the modelling of traffic and the effectiveness of proposed mitigation;
- limited benefit to the local economy;
- impact on health and quality of life;
- increased air, noise, water and light pollution;
- landscape and visual impact;
- loss of countryside and wildlife habitat;
- impact on public rights of way (PRoW);
- impact on local heritage assets, including inadequate archaeological assessment; and
- loss of productive agricultural land.

4.2.4. In addition, a small number of RRs received were supportive of the Proposed Development. These included, but are not limited to, Ms Mee [RR-045], Ms Beaumont [RR-220], Mr MacPhee [RR-269] and Mr Hayes [RR-715]. The reasons for support that were commonly raised can be characterised as follows:

- the planet is facing a crisis and the Proposed Development is a step in the right direction;
- need to control global warming;
- the marshes are poor grade farmland, but it is important that they are not lost to house building; and
- the proposal would represent a key part of the UK's energy generation mix.

Written Representations

4.2.5. A wide range of Written Representations (WRs) were submitted and these amplified the positions and points raised in the RRs of IPs. Amongst others, there were substantive elaborations from Dr Erasin [REP2-060], CPRE Kent [REP2-065 to REP2-067], Mr Gomes [REP2-072], GREAT [REP2-085], Historic England [REP2-087], Kent Wildlife Trust [REP2-092], Natural England [REP2-096] and Mr Ledger [REP2-103].

4.2.6. Kent County Council provided comment at both the RR and WR stages [RR-797] and [REP2-052]. The Council set out its position in relation to the Proposed Development in its RR and provided an update on the principal submission within the WR. In its WR, Kent County Council accepted that '*vehicle movements associated with the construction, operation and decommissioning of the proposed Solar Park can be accommodated on the local highway network with the appropriate mitigation in place*', and further stated that the Council was content that the Construction Traffic Management Plan (CTMP) could be agreed prior to development commencing.

- 4.2.7. Canterbury City Council did not provide comment at the WR stage, rather a LIR [REP1-002] was produced expanding on the identified principal issues.

Oral Representations

- 4.2.8. The three Open Floor Hearings (OFHs) held during the Examination [EV-012], [EV-018] and [EV-025] provided the opportunity for IPs to make oral submissions. There were 17 speakers at the first OFH, 12 at the second and nine at the third, with some individuals making contributions on more than one occasion. Most submissions opposed the Proposed Development, with points raised reflecting the issues already outlined above. The matters raised are addressed in relation to relevant planning issues in the subsequent sections and chapters that follow.

Conclusion on Issues Arising from Submissions

- 4.2.9. We have considered all issues arising from both written and oral submissions. Matters arising from the submissions have been carried forward and are addressed as necessary in Chapters 5 to 9 of this Report.

4.3. ISSUES ARISING IN LOCAL IMPACT REPORTS

Introduction

- 4.3.1. Swale Borough Council, Canterbury City Council and Kent County Council each produced a Local Impact Report (LIR) [REP1-005], [REP1-002] and [REP1-004]. Each is addressed in turn below.

LIR Issues

Swale Borough Council LIR

- 4.3.2. The LIR [REP1-005] commenced with an introduction, description of the site location and Proposed Development, the planning history of the site and relevant national and local planning policy. The LIR then considered the following local impacts, which are addressed as listed:

- climate change (Chapter 5);
- landscape (Chapter 6);
- residential amenity (Chapter 6);
- glint and glare (Chapter 6);
- ecology and ornithology (Chapter 7);
- cultural heritage (Chapter 8);
- land use and agriculture (Chapter 8);
- transport (Chapter 8);
- noise and vibration (Chapter 8);
- public rights of way (Chapter 8);
- tourism and economy (Chapter 8); and
- air quality (Chapter 8).

Canterbury City Council LIR

- 4.3.3. The LIR [REP1-002] commenced with a brief discussion of the scope, relevant planning history of the site, purpose and structure of the LIR, description of the area and details of the relevant statutory development plan.
- 4.3.4. The main body of the LIR identified relevant development plan and other local policy and the extent to which the Proposed Development would comply. The following local impacts were considered, along with compliance with local-level policies, and these are addressed later in this Report as listed:
- landscape and visual impact (Chapter 6);
 - ecology/ornithology/biodiversity (Chapter 7);
 - heritage assets (Chapter 8);
 - highways, access and traffic (Chapter 8).
 - drainage and flood risk (Chapter 8);
 - socio-economic (Chapter 8); and
 - drainage and flood risk (Chapter 8).

Kent County Council LIR

- 4.3.5. Following a brief introduction, description of the site location and Proposed Development, the LIR [REP1-004] considered the following local impacts. These are addressed in our Report as follows:
- climate change and energy generation (Chapter 5);
 - biodiversity (Chapter 7);
 - heritage conservation (Chapter 8);
 - highways (Chapter 8);
 - public rights of way (Chapter 8); and
 - sustainable urban drainage systems (Chapter 8).
- 4.3.6. Kent County Council deferred to Swale Borough Council and Canterbury City Council on matters relating to land use and agriculture, noise and vibration, glint and glare, tourism and economy, residential amenity and landscape.

Conclusion on LIR Issues

- 4.3.7. We have considered all issues arising from the three LIRs. Detailed LIR analysis is carried forward and addressed in subsequent chapters of this Report.

4.4. CONFORMITY WITH NATIONAL POLICY STATEMENTS (NPSs)

Introduction

- 4.4.1. This section considers whether the Proposed Development conforms with the relevant NPSs that are identified in Chapter 3 of this Report.

The Energy NPSs

4.4.2. We consider the following NPSs to be important and relevant in this case:

- EN-1: Overarching NPS for Energy; and
- EN-5: Electricity Networks Infrastructure.

4.4.3. The NPSs were designated by the SoS for Energy and Climate Change on 19 July 2011. Responsibility for energy now rests with the SoS for Business, Energy and Industrial Strategy. The NPSs form the primary policy context for this Examination and our findings, conclusions and recommendations, applying the approach set out in s105 of the PA2008. The purpose and broad content of these NPSs is summarised here. However, topic-specific consideration of policy arising from them is provided where necessary later in this Report.

EN-1: Overarching National Policy Statement for Energy

4.4.4. NPS EN-1 (July 2011) sets out general principles and generic impacts to be taken into account in considering applications for energy NSIPs. It provides the primary basis for determining if development consent should be granted. All other energy NPSs are used together with this NPS. The overarching policy objectives that underpin NPS EN-1 include:

- meeting the demand for energy generation in the United Kingdom (UK); and
- transitioning to low carbon sources and reducing greenhouse gas emissions.

4.4.5. While NPS EN-1 is clear about the Government's commitment to transitioning to low carbon sources and meeting the targets to reduce emissions, it also acknowledges the role that fossil fuels will continue to play in energy generation as the UK moves to meet these commitments. The need for projects to strike a balance in meeting the overarching policy objectives is acknowledged throughout NPS EN-1.

4.4.6. Section 2 sets out the direction of travel for meeting the above-mentioned Government objectives for carbon emission reductions, energy security and affordability. The paragraphs of note are:

- paragraph 2.2.1 states that 'We are committed to meeting our legally binding target to cut greenhouse gas emissions by at least 80% by 2050, compared to 1990 levels'⁷;
- paragraph 2.2.5 states that 'The UK economy is reliant on fossil fuels, and they are likely to play a significant role for some time to come';
- further, paragraph 2.2.6 states 'However, the UK needs to wean itself off such a high carbon energy mix: to reduce greenhouse gas emissions, and to improve the security, availability and affordability of energy through diversification';

⁷ The 80% target originally set in the CCA 2008 has since been amended to 100% net zero for 2050 by the Climate Change Act 2008 (2050 Target Amendment) Order 2019 SI 1056 which came into force in July 2019

- in paragraph 2.2.20, NPS EN-1 makes a clear case for the continuing demand for electricity in the UK, stating 'It is critical that the UK continues to have secure and reliable supplies of electricity as we make the transition to a low carbon economy'; and
- referring to the 2050 pathways analysis, paragraph 2.2.22 states that demand for electricity could double over the next forty years. Paragraphs 2.2.22 and 2.2.23 acknowledge that in order to meet emissions targets, the electricity being consumed will need to be almost exclusively from low carbon sources, and for this purpose the UK must reduce over time its dependence on fossil fuels, particularly unabated combustion.

4.4.7. Sections 3.1 and 3.2 set out a presumption in favour of granting consent for energy NSIPs, and require the weight attributed to considerations of need to be proportionate to the project's actual contributions. The paragraphs of note are:

- paragraph 3.1.1 states that 'the UK needs all the types of energy infrastructure covered by the NPS's in order to achieve energy security at the same time as dramatically reducing greenhouse gas emissions';
- paragraph 3.1.4 states that 'the SoS should give substantial weight to the contribution which projects would make towards satisfying this need when considering applications for development consent under the PA2008'; and
- paragraph 3.2.3 says, 'the weight which is attributed to considerations of need in any given case should be proportionate to the anticipated extent of a project's actual contribution to satisfying the need for a particular type of infrastructure'.

4.4.8. Section 3.3 also talks about the urgency for new electricity generation capacity, and states that there is a need for new energy NSIPs to be brought forward as soon as possible, and certainly in the next 10 to 15 years. Paragraph 3.3.16 also states that since NSIPs take a long time to move from design conception to operation, the Government has considered a planning horizon of 2025 for the energy NPSs in general. The same paragraph states:

'A failure to decarbonise and diversify our energy sources now could result in the UK becoming locked into a system of high carbon generation, which would make it very difficult and expensive to meet our 2050 carbon reduction target. We cannot afford for this to happen.'

4.4.9. Paragraph 3.3.2 notes that new generating capacity is required because of the need to ensure energy security, and so the need to ensure sufficient capacity is a key objective of Government energy policy:

'The Government needs to ensure sufficient electricity generating capacity is available to meet maximum peak demand, with a safety margin or spare capacity to accommodate unexpectedly high demand and to mitigate risks such as unexpected plant closures and extreme weather events.'

- 4.4.10. Paragraph 3.3.7 says that at least 22 gigawatt of existing electricity generating capacity will need to be replaced in the UK in the coming years, particularly to 2020, as a result of tightening environmental regulation and ageing power stations.
- 4.4.11. Paragraph 3.3.12 notes the need for the installation of supporting technologies, but highlights that there will be a requirement for greater generating capacity to act as backup to the existing renewable technologies:
- 'There are a number of other technologies which can be used to compensate for the intermittency of renewable generation, such as electricity storage, interconnection and demand-side response, without building additional generation capacity. Although Government believes these technologies will play important roles in a low carbon electricity system, the development and deployment of these technologies at the necessary scale has yet to be achieved. The Government does not therefore consider it prudent to solely rely on these technologies to meet demand without the additional back-up capacity [...]. It is therefore likely that increasing reliance on renewables will mean that we need more total electricity capacity than we have now, with a larger proportion being built only or mainly to perform back-up functions.'*
- 4.4.12. As set out in Part 4 of NPS EN-1, generic impacts of relevance to this Application include impacts on air quality and emissions, biodiversity, historic environment, landscape and visual, traffic and transport, and socioeconomic benefits at national, regional and local levels.
- 4.4.13. Part 4 of NPS EN-1 also details additional matters relevant to the ES, including:
- whether the Proposed Development would have a significant effect on a European site;
 - the consideration of alternatives and good design;
 - climate change adaptation;
 - grid connection;
 - pollution control;
 - safety; and
 - health and security considerations.
- 4.4.14. Paragraph 4.1.2 of NPS EN-1 says that the SoS should start with a presumption in favour of granting consent to applications for energy NSIPs, and that the presumption applies unless any more specific and relevant policies set out in the relevant NPSs clearly indicate that consent should be refused.
- 4.4.15. Additionally, paragraph 4.1.3 states that the SoS should consider environmental, social and economic benefits and adverse impacts at national, regional and local levels. These considerations should include potential benefits in meeting the need for energy infrastructure, job creation and any long-term or wider benefits and any potential adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts.

- 4.4.16. There are only limited references to battery storage in this and other energy related NPSs.

EN-5: National Policy Statement for Electricity Networks Infrastructure

- 4.4.17. The National Policy Statement for Electricity Networks Infrastructure, NPS EN-5 (July 2011), sets out matters that bear on the consenting of electricity network infrastructure, which can include above-ground electricity lines that form part of the distribution system, with a nominal voltage expected to be 132kV or above. As previously discussed in section 3.3.6 of this Report, paragraph 1.8.2 of NPS EN-5 notes that it can also cover development that '*constitutes associated development for which consent is sought along with an NSIP such as a generating station or relevant overhead line*'. NPS EN-5 will therefore be relevant to the proposed new substation and underground 400kV connection to the existing Cleve Hill substation.
- 4.4.18. NPS EN-5 also provides a simplified route map for dealing with electric, magnetic and electromagnetic fields (EMF), identifying that evidence should be provided that the line complies with the International Commission on Non-Ionizing Radiation Protection (ICNIRP) limits at the nearest residential property.

Conclusion on NPS Policy

- 4.4.19. The compliance of the Proposed Development has been examined against policy detail and tests applicable to individual planning issues as set out in the relevant paragraphs of NPS EN-1 and NPS EN-5, and this analysis is carried out in the following chapters.
- 4.4.20. Overall, in terms of Government policy relating to meeting the demand for energy generation in the UK and moving to low carbon sources in order to address climate change, we consider that the Proposed Development would broadly accord with the thrust and intent of NPS EN-1 and NPS EN-5.

4.5. CONFORMITY WITH THE MARINE POLICY STATEMENT AND MARINE PLANS

- 4.5.1. Since some works within the Proposed Development would be located below mean high water at spring tides (MHWS), it is subject to The Marine and Coastal Access Act 2009 (MACAA2009). MACAA2009 established the Marine Management Organisation (MMO) and the designation of Marine Conservation Zones (MCZ) in UK waters. In this case, the relevant MCZ is The Swale MCZ. As detailed in Chapter 3, MACAA2009 also provides for the preparation of a Marine Policy Statement and Inshore and Offshore Marine Plans.
- 4.5.2. The UK Marine Policy Statement (MPS) was prepared and adopted for the purposes of s44 of MACAA2009 and was published on 18 March 2011 by all the UK administrations as part of a new system of marine planning being introduced across UK seas. The MPS is the framework for preparing

Marine Plans and taking decisions affecting the marine environment. It contributes to the achievement of sustainable development in the UK marine area. The UK marine area includes the territorial seas and offshore area adjacent to the UK, which includes the area of sea designated as the UK Exclusive Economic Zone (the Renewable Energy Zone until the Exclusive Economic Zone comes into force) and the UK sector of the continental shelf. It includes any area submerged by seawater at mean high water spring tide, as well as the tidal extent (at mean high water spring tide) of rivers, estuaries and creeks.

- 4.5.3. The MPS reflects the NPSs in balancing the national, regional or more local need for the such a proposal against expected adverse effects including cumulative impacts.
- 4.5.4. At Schedule 8, the dDCO [REP17-003] submitted as part of the Application also contains a Deemed Marine Licence (DML) under part 4 of MACAA2009. The MPS has provided the overarching policy context for our consideration of the DML.

4.6. CONFORMITY WITH DEVELOPMENT PLANS

Introduction

- 4.6.1. This section considers whether the Proposed Development conforms with the relevant development plan policies set out in Chapter 3 of this Report.

Relevant Development Plan Policies

- 4.6.2. We have set out the relevant development plan policies identified by the Applicant and IPs at section 3.12 above which we acknowledge to be important and relevant to the Proposed Development. The principal areas of potential conflict with development plan policies are set out below.
- 4.6.3. In the Swale Borough Council LIR [REP1-005], conflict with development plan policy was identified within the following areas:
- landscape and visual impact;
 - residential amenity;
 - heritage impacts;
 - transport;
 - public rights of way; and
 - tourism and economy.
- 4.6.4. The SoCG between the Applicant and Swale Borough Council [REP4-037] confirmed the following as matters where agreement had not been reached and which therefore potentially conflicted with development plan policy:
- landscape and visual impact;
 - residential amenity;
 - heritage impacts; and

- public rights of way.

4.6.5. In the Canterbury City Council and Kent County Council LIRs [REP1-002 and REP1-004], both Councils confirmed areas where the Proposed Development may have a detrimental impact, although neither specifically identified lack of conformity or otherwise with policy. In the Canterbury City Council Statement of Common Ground (SoCG) submitted at Deadline 5 [REP5-014], it is confirmed that ecological and ornithological matters had been deferred to statutory consultees. In addition, landscape and visual considerations remained matters for which agreement had not been reached with the Applicant and were therefore seen to be potentially in conflict with development plan policy.

4.6.6. The SoCG between the Applicant and Kent County Council submitted at Deadline 7 [REP7-029] identified areas of agreement and those matters which had been deferred to other statutory consultees, including noise and vibration and ecology and ornithology. The Council confirmed, at the time of completion of the SoCG, two areas remained where agreement had not been reached:

- impact on the historic landscape; and
- non-motorised user survey.

Conclusion on Development Plan

4.6.7. Policy other than that arising from NPSs is capable of being important and relevant⁸. The compliance or otherwise of the Proposed Development with the relevant development plan policies is identified and analysed further in relation to the individual topics in the following chapters. Weight has been given to development plan policies in accordance with the stage reached in the plan-making process as indicated in paragraph 5.10.73 of NPS EN-1.

4.6.8. We were not referred to any plan policies arising from Neighbourhood Plans.

4.7. THE NATIONAL PLANNING POLICY FRAMEWORK (NPPF)

4.7.1. The NPPF sets out the Government's planning policies for England and how these are expected to be applied. It provides a framework upon which local planning authorities make development plans and is also a material consideration for local planning authorities when making planning decisions for development under the TCPA1990.

4.7.2. The policies in the NPPF are supported by National Planning Practice Guidance (the Guidance). Both the NPPF and the Guidance are likely to be important and relevant considerations in decisions on NSIPs, but only to the extent relevant to that project.

⁸ PA2008 s104 (2) (d)

- 4.7.3. Paragraph 5 of the NPPF makes it clear that the document does not contain specific policies for NSIPs, where particular considerations can apply. It also states that matters considered to be both important and relevant to NSIPs may include the NPPF and the policies within it.
- 4.7.4. Chapter 2, paragraphs 7 and 8, states that the Government's approach to achieving sustainable development means that the planning system has three overarching objectives, these being economic, social and environmental, which are interdependent and need to be pursued in mutually supportive ways.
- 4.7.5. As such, we have considered some parts of the NPPF to be relevant to this Application and have considered appropriate matters in our Examination.

4.8. ENVIRONMENTAL IMPACT ASSESSMENT

Introduction

- 4.8.1. As recorded in Chapter 1 of this Report and for reasons set out there, the Application is EIA development. This section records the documents that comprise the Environmental Statement (ES) and the changes made to those documents during the Pre-examination and Examination stages.
- 4.8.2. It also records the environmental management documents proposed by the Applicant to work in tandem with DCO provisions to secure the construction and operation of the Proposed Development within the parameters assessed in the ES, and the application of mitigation measures that were relied on when undertaking the EIA.
- 4.8.3. This section concludes on the question of whether the submitted ES and EIA process provide an adequate basis for decision making by the SoS.

The Submitted Environmental Statement

- 4.8.4. An ES was provided with the Application documents [APP-030] to [APP-250] and it includes a non-technical summary [APP-249].
- 4.8.5. In response to our Rule 17 request [PD-009] the Applicant added a new Schedule 10 to the dDCO [REP7-005] to update the definition of the documents which comprise the ES. We accepted this to be correct and that it reflected the documentation which comprise the ES.
- 4.8.6. The full list of documents that comprise the final ES at the close of Examination is set out in section 6 of the Applicant's *Guide to the Application*, revision I [REP17-002].

Environmental Management Plans

- 4.8.7. The ES provided with the Application included the following outline environmental management plan documents:
- Landscape and Biodiversity Management Plan [APP-203];

- Outline Construction and Environmental Management Plan [APP-205];
- Outline Decommissioning and Restoration Plan [APP-206];
- Outline Special Protection Area Construction Noise Management Plan [APP-243]; and
- Construction Traffic Management Plan [APP-245].

4.8.8. The role and complex nature of these management plans was discussed during the course of the Examination, and we included written questions and asked oral questions about them at some of the ISHs. There was some confusion about how the various plans interrelated or 'nested', and uncertainty about how comprehensive the various management plans were in picking up each of the necessary mitigation measures used in the ES, given the lack of a clear 'mitigation route map'.

4.8.9. As a result, the Applicant updated the outline management plans at several Examination Deadlines, including a comprehensive overhaul for Deadline 6.

4.8.10. These outline management plan documents are defined and secured in the dDCO. In each case, the final versions would be prepared by the Applicant and submitted to the local planning authority for approval prior to the commencement of the relevant phase of the Proposed Development. The dDCO requires the final management plans to accord with the outline management plans and for them to be implemented as approved.

4.8.11. The final versions at the close of the Examination are:

- Landscape and Biodiversity Management Plan [REP7-013];
- Outline Construction Environmental Management Plan [REP7-015];
- Outline Decommissioning and Restoration Plan [REP7-017];
- Outline Special Protection Area Construction Noise Management Plan [REP7-019]; and
- Outline Construction Traffic Management Plan [REP7-021].

An Adequate EIA Process and Environmental Statement

4.8.12. We had concerns about some aspects of the EIA process that had been undertaken. As a result, we raised the principal matters with the Applicant in both sets of written questions ([PD-004] and [PD-008]) and in our Rule 17 request for information [PD-009], and as agenda items for ISH2 [EV-007] and ISH5 [EV-022].

Likely significant effects

4.8.13. The EIA Regulations require the identification of 'significant effects.' The Applicant adopted a dual approach to determining significance in the ES, leading to some confusion. A matrix of magnitude of change against value/sensitivity of receptor was used to generate a descriptor of significance of effect [APP-032]: this is common and accepted practice in EIA. However, the methodology went on to say that generated effects of minor significance and some of moderate significance were concluded not

to be significant *'in terms of the EIA Regulations'*. We asked the Applicant if, in the context of sustainable development and planning policy, proportionate and reasonable mitigation had been provided for all likely significant adverse effects.

- 4.8.14. In the Applicant's response to ExQ1 [REP2-006], we were not given a clear answer as to what constituted significance *'in terms of the EIA Regulations'*, so we pursued the matter at ISH2. In response, the Applicant told us that no specific threshold had been used for the mitigation of effects and that measures had been proposed where practicable to counteract any identified adverse effect of greater than negligible significance [REP3-015]. Our own review of adverse effects identified in the ES reassures us that this appears to be the case, and that the legal requirements and policy in this respect have been observed.

The Candidate Design and the Outline Design Principles

- 4.8.15. The Applicant's assessment of likely significant effects in the ES is established against detailed 'Candidate Design' parameters [APP-035], while also referencing a broader set of 'Outline Design Principles' in the dDCO. We had concerns about the Applicant's approach in this regard, primarily the need for consistency between what would be authorised by the DCO and what had been assessed in the ES. We examined whether and to what extent the Applicant's approach could result in an Order granting Development Consent beyond what had been assessed in the ES.
- 4.8.16. The Applicant maintained a position that each element or parameter of the Proposed Development with the capacity materially to affect the outcome of the EIA was appropriately captured in the Outline Design Principles (initially [APP-251]), updated throughout the Examination). We are content that a Rochdale Envelope approach is common and justified in the context of rapidly advancing renewable energy, solar PV and battery storage technologies, and draft Requirement 2 was included in the dDCO to ensure that the detailed design of the Proposed Development would accord with the Outline Design Principles through subsequent assessment and discharge by the local planning authority. Furthermore, Requirement 19 of the dDCO requires the development to be carried out in accordance with the approved details unless amendments are in accordance with the principles and assessments in the ES. Despite these assurances, we remained unconvinced that adherence to the Outline Design Principles specified in the dDCO could not subsequently result in significant effects beyond those assessed in the ES (for the Candidate Design).
- 4.8.17. We pursued this matter through the Examination to ensure that the development would be restricted to those parameters that had been assessed in the ES. We included questions in ExQ1 [PD-004] and ExQ2 [PD-008]. It was also on the agenda at ISH2 [EV-007] and ISH5 [EV-022]. We asked the Applicant to explain how the approach was comprehensive and robust, and we pointed out several examples that we believed represented potential gaps or discrepancies between the

Candidate Design and Outline Design Principles. The Applicant made minor incremental improvements to the Outline Design Principles at various Deadlines following our questions, culminating in the final version at the close of Examination (revision F, [REP7-023]).

- 4.8.18. In our Rule 17 request for information [PD-009] towards the end of Examination, we informed the Applicant that we still had concerns about the relationship between the assessed Candidate Design and the Outline Design Principles referenced in the dDCO. We noted that a fundamental principle of the EIA process is that the DCO (the consent) must not authorise development with significant effects beyond those that had been assessed in the ES. In the absence of the necessary certainty in the evidence before us, there remained a concern in our minds that the current approach could result in an authorisation for development beyond what was assessed.
- 4.8.19. We therefore suggested that we might include an amended or additional Requirement in the Recommended DCO to address these concerns. We asked the Applicant to provide suitable wording that would secure the necessary parameters and restrict any development beyond that which is presented in the Candidate Design assessed in the ES. We also requested that this should address commitments made during the course of the Examination that were reflected in the current version of the updated Outline Design Principles [REP6-011] but which did not appear in the Candidate Design defined in ES Chapter 5 [APP-035], insofar as these were material to the assessment.
- 4.8.20. In its Deadline 7 response [REP7-030], the Applicant chose not to provide such wording but defended the approach that had been taken and suggested that the *'Development is a simple proposal and therefore the relevant parameters for the purpose of assessment which are likely to result in the maximum adverse effect are also relatively simple and limited'*. The Applicant further suggested that while they appear to be limited in scope, the secured Outline Design Principles parameters are those that *'are likely to result in the maximum adverse effect'*.
- 4.8.21. Notwithstanding this, at Deadline 7, the Applicant sought to address our concerns by appending the Candidate Design parameters to the final version of the Outline Design Principles (Appendix B, [REP7-023]). Text was also added [REP7-023] to reinforce that, in order for Requirement 2 of the DCO to be discharged, the detailed design parameters of the final proposals must be directly compared to the detailed Candidate Design parameters set out in Appendix B and, if necessary, justification must be provided to the planning authority to demonstrate that an exceedance would not result in an increase in the maximum adverse effect assessed in the ES. As such, the inclusion of the Candidate Design in Appendix B [REP7-023] was only to allow for comparison between the two sets of parameters and did not change the Applicant's approach of securing the Outline Design Principles (rather than Candidate Design) through the DCO.

- 4.8.22. Whilst this provided a further check and additional reassurance, we believe that the approach retains a theoretical possibility that the Proposed Development could be built outside the parameter envelope used in the ES, which could result in adverse impacts of greater significance than those identified. Draft Requirements 2 and 19 of the final dDCO [REP17-003] still do not restrict anything that lies within the scope of the Outline Design Principles but was not considered in the Candidate Design and ES parameters.
- 4.8.23. Nevertheless, from our own thorough analysis of the ES, Outline Design Principles and dDCO, as updated during the Examination, we are satisfied that the parameters likely to have a material effect on the assessment of significant effects presented in the ES are secured through the final version of the Outline Design Principles [REP7-023]. As such, it is our view that there are no obvious remaining permutations with the capacity to result in significant effects beyond those assessed in the ES. This same opinion is strongly expressed by the Applicant [REP7-030], and no IPs have raised any issues in this regard.
- 4.8.24. On balance, we accept the Applicant's assertion that any further refinement of the Outline Design Principles is not likely to change the assessment of significant effects presented in the ES, though we would highlight that, before discharging Requirements 2 or 19 for any stage or part of the proposals, the planning authority will need to study in detail the design put forward for the final development, alongside any additional evidence, to compare its effects against those of the Candidate Design in the ES, ensuring that proposals are justified in the context of the ES.
- 4.8.25. As such, we make the pragmatic recommendation that the content of the ES and associated Application documentation is satisfactory in relation to this matter. However, we also recognise a remote possibility that the Proposed Development could be built to parameters beyond what has been assessed in the ES. We discuss this further in Chapter 12 of our Report in connection with the drafting of the Recommended DCO.

Mitigation Schedule

- 4.8.26. The Mitigation Schedule submitted with the Application [APP-252] did not include 'embedded mitigation', described by the Applicant as that which forms part of the development design and already considered in the EIA. We were concerned that many of the excluded measures were reliant on the accurate translation of 'outline' management plan documents into final versions for certification for approval by the local planning authority when discharging the relevant Requirements. As such, we did not believe that these measures were 'certain' or 'inherent' in the design of the Proposed Development as they would require additional information and action in order that they could be secured.
- 4.8.27. This created some uncertainty and a lack of clarity when tracking commitments from the ES and its outline management plans through the Mitigation Schedule into the draft Requirements and ultimately into certified management plans. In turn, we were concerned that, should the

Order be made, this could introduce uncertainty or lack of transparency when the authority responsible for certifying the final versions came to ensure that all measures committed to in the ES were secured before discharging the relevant Requirement.

- 4.8.28. We pursued this line of enquiry with the Applicant throughout the Examination and asked a number of written and oral questions. Successive versions of the Mitigation Schedule were produced at various Deadlines [REP2-005], [REP3-011] and [REP4-018], culminating in a more comprehensive 'Mitigation Route Map' [REP6-013] at Deadline 6.
- 4.8.29. In our Rule 17 request [PD-009], we directed the Applicant to consider how the Mitigation Route Map could be strengthened by the inclusion of reference to other plans. The Applicant addressed this in a revised and final version of the Mitigation Route Map at Deadline 7 [REP7-025].

The outline management plans

- 4.8.30. The Application included outline management plans that are intended to be detailed and finalised post-consent to be secured through the discharge of various Requirements (the final versions of which 'must accord with' the outline plans). They cover the construction, operational and decommissioning phases. While this is not an unusual approach, we did raise some concerns over the complexity and number of such plans and in particular how they integrated or 'nested'.
- 4.8.31. For example, the mitigation of some of the adverse effects addressed in the outline Landscape and Biodiversity Management Plan (LBMP) [APP-203] relied on measures set out in the outline Construction Environmental Management Plan (CEMP) [APP-205] for detail. The CEMP would therefore be the vehicle for securing measures to address these issues. However, some measures did not seem to be translated from the LBMP to the CEMP, so there would be no mechanism for them to be secured through any DCO. Some important measures referred to in the ES also appeared to be missing altogether from the outline plans, even at the highest level, so there could be no surety that they would be included in the final management plan, meaning that some essential mitigation would not be secured. (For example, a pollution incident response plan was relied on in the ES but did not appear in any of the construction management plans.)
- 4.8.32. Incremental improvements were made, and, at Deadline 6, the Applicant added an Appendix to the Mitigation Route Map [REP6-013] that set out how the various management plans inter-related and how they would be secured. There was also adequate cross-referencing between the various updated management plans where necessary to ensure that they would work together (for example, in the Deadline 6 outline LBMP [REP6-006] and outline CEMP [REP6-007]).
- 4.8.33. Further refinements were made, and the final version of the Mitigation Route Map was submitted at Deadline 7 [REP7-025]. While the outline management plans remain complex, we are satisfied that there is now

sufficient direction and clarity for the authority that would ultimately be responsible for discharge of Requirements.

Flexibility between battery storage and an extended solar PV array

- 4.8.34. For Work No. 2, the dDCO seeks flexibility between a battery storage facility or an extension of the solar PV arrays. The ES [APP-035] states:

'For all technical assessments, the realistic worst case is that the electrical compound is developed to its maximum extents, as set out above therefore the extension to the solar park is not assessed separately in this ES.'

- 4.8.35. We were not clear from the evidence provided that this was the case and sought clarification from the Applicant in ExQ1.5.6 [PD-004] about the respective effects of the two options, particularly in relation to the noise and glint and glare assessments.

- 4.8.36. In an oral submission at ISH5, followed up in [REP5-010], the Applicant confirmed that it had reviewed whether the assessment was robust for all environmental issues if additional solar PV panels were constructed instead of the energy storage, including glint and glare, and construction and operational noise. In respect of glint and glare, the Applicant had submitted a clarification note at Deadline 3 [REP3-022]. This clarified that there would be no changes to the conclusions in the ES if solar PV panels were constructed instead of the energy storage facility. The Applicant further confirmed that the operational noise of the energy storage facility would exceed the noise emitted from additional solar PV panels. As such, we are content that the ES as submitted does address the worst case when considering the respective environmental effects of the two options for Work No. 2.

Conclusions on the EIA Process and the Environmental Statement

- 4.8.37. In reaching the overall conclusion and recommendations set out in this Report, we have considered all documentation relevant to the EIA in the context of the requirements of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.
- 4.8.38. Subject to our minor reservation and suggestion set out in Chapter 12, and while the EIA approach and evidence submitted with the Application caused us some concerns, we are satisfied that, with the incremental improvements made and additional safeguards provided during the course of the Examination, the submitted documentation represents a compliant ES and provides an adequate basis for the environmental assessment and identification of significant effects required by the EIA Regulations.

4.9. HABITATS REGULATIONS ASSESSMENT

- 4.9.1. As recorded in Chapter 1 of this Report and for reasons described there, the Application is subject to HRA. The relevant legislation is summarised in Chapter 3.
- 4.9.2. A separate record of HRA considerations is set out in Chapter 9.
- 4.9.3. In reaching the overall conclusion and recommendations in this Report, we have considered all documentation relevant to HRA as required by section 4.3 of NPS EN-1, including all HRA-relevant design and mitigation proposals in the ES, as secured through the Recommended DCO.
- 4.9.4. We are satisfied that, as a whole, the HRA evidence submitted with the Application and during the course of the Examination provides an adequate basis on which the Secretary of State can fulfil the duties of competent authority.

5. FINDINGS AND CONCLUSIONS IN RELATION TO MEETING ENERGY NEED

5.1. INTRODUCTION

- 5.1.1. This chapter examines the need for the Proposed Development. It reflects the topics raised in writing and discussed at Issue Specific Hearing 1 (ISH1) on Need including:
- climate change and the need for low-carbon and renewable energy generation;
 - the UK energy market;
 - the role of solar PV;
 - solar PV and battery energy storage;
 - the viability of the Proposed Development;
 - consideration of other sites and other technologies;
 - the scale and design of the Proposed Development; and
 - the Applicant's experience.
- 5.1.2. The chapter also examines oral and written submissions which followed ISH1 and concludes with a summary conclusion on the need for the Proposed Development.

5.2. POLICY CONSIDERATIONS

National Policy Statements (NPSs)

- 5.2.1. National Policy Statements (NPS EN-1 and NPS EN-5) set out a case for the need and urgency for new energy infrastructure to be consented and built with the aim of supporting the Government's policies on sustainable development, notably by mitigating and adapting to climate change, and contributing to a secure, diverse and affordable energy supply.
- 5.2.2. NPS EN-1 is the overarching national policy statement for energy. It has effect in combination with technology-specific NPSs (where relevant) on applications for energy infrastructure which fall within the ambit of the Planning Act 2008 (PA2008).
- 5.2.3. Part 2 of NPS EN-1 explains that the Government is committed to meeting the legally binding target to cut greenhouse emissions by at least 80%⁹ by 2050, compared to 1990 levels. It acknowledges that this will require major investment and electrification of much of our heating, industry and transport. Cleaner power generation and major changes in the way that energy is used will also be needed.
- 5.2.4. The NPS recognises that delivering this change will be a major challenge for energy providers. The focus of Government activity in this transformation is to facilitate investment by the private sector in new

⁹ As noted before, this target is now 100% for England

low-carbon energy infrastructure to contribute to climate change mitigation and to ensure security of supply.

- 5.2.5. The Government's wider objectives for energy infrastructure include contributing to sustainable development in order to address climate change and to ensure the well-being of society and the economy. By way of example, it is recognised that the availability of appropriate infrastructure supports the efficient working of the market, ensuring competitive prices for consumers.
- 5.2.6. Part 3 of NPS EN-1 highlights the need for all the types of energy infrastructure covered by the NPS for energy security and to reduce greenhouse gas emissions dramatically. It is for industry to propose new energy infrastructure projects within the strategic framework set by Government, and planning policy should not set targets for, or limits on, different technologies.
- 5.2.7. All applications for development consent for the types of infrastructure covered by the energy NPSs should be assessed on the presumption that there is a need for those types of infrastructure. Substantial weight is to be given to the contribution which projects would make towards satisfying this need when considering applications under the PA2008.
- 5.2.8. Part 3 continues by recognising the benefits of having a diverse mix of all types of power generation with different technologies complementing each other. It acknowledges the intermittency of some renewable sources and the related need to increase overall generating capacity as the proportion of renewables increases. Electricity storage is identified as one of the means that could be used to compensate for the intermittency of renewable generation although, at the time of publication of NPS EN-1, the development and deployment of electricity storage at the necessary scale had not been achieved.
- 5.2.9. The Government has considered alternatives to new, large-scale electricity generation capacity including reducing demand, more intelligent use of electricity and interconnection of electricity systems. The overall conclusion is that, even with these measures, the effect on the need for new large-scale energy infrastructure will be limited.
- 5.2.10. Part 4 sets out assessment principles. Given the level and urgency of need for infrastructure of the types covered by the energy NPSs, consideration of applications for development consent should start with a presumption in favour of granting consent unless more specific and relevant policies in the related NPSs clearly indicate that consent should be refused. The presumption is also subject to the provisions of the PA2008, set out in paragraph 1.1.2 of NPS EN-1, and other specified documents and any other matters that the decision maker thinks are both important and relevant to the decision.
- 5.2.11. Guidance is given on grid connection as an important consideration for applicants wishing to construct generation plant. In the market system, it is for an applicant to ensure that there will be the necessary

infrastructure and capacity within a transmission or distribution network to accommodate the electricity generated. The development consent decision maker will need to be satisfied that there is no obvious reason why a grid connection would not be possible.

- 5.2.12. NPS EN-5 is a companion to NPS EN-1 and relates to electricity networks infrastructure. The introduction explains that the new electricity generating infrastructure that the UK needs will be heavily dependent on the availability of a fit for purpose and robust electricity network. That network will need to be able to support a more complex system of supply and demand than currently and cope with generation occurring in more diverse locations.
- 5.2.13. The remainder of NPS EN-5 is largely concerned with electricity network infrastructure comprising transmission systems and associated infrastructure.

National Planning Policy Framework (NPPF)

- 5.2.14. Chapter 14 of the NPPF indicates that the planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change.

- 5.2.15. In terms of planning for climate change, the NPPF confirms:

'When determining planning applications for renewable and low carbon development, local planning authorities should: not require applicants to demonstrate the overall need for renewable and low carbon energy; and approve the application if its impacts are (or can be made) acceptable'

Climate Change Act 2008 (as amended) and the Committee on Climate Change

- 5.2.16. The Climate Change Act 2008, which originally set legally binding targets for the UK to cut carbon dioxide and greenhouse gas emissions by 34% by 2020 and at least 80% by 2050 from 1990 levels, was amended in July 2019. This places a duty on the SoS to ensure that the net UK carbon account at 2050 is at least 100% lower than the 1990 baseline. This target, otherwise known as 'Net Zero', constitutes a legally binding commitment to end the UK's contribution to climate change.
- 5.2.17. The amendment to the Act followed a 2018 special report by the Intergovernmental Panel on Climate Change on the impact of global warming at 1.5°C above pre-industrial levels and the inadequacy of the 2°C threshold, and the Committee on Climate Change's *'Reducing UK emissions - 2019 Progress Report to Parliament'*.
- 5.2.18. The Government Response, *'Leading on Clean Growth'* (October 2019), reported on key achievements in the UK power sector including a record 33% of electricity generation from renewables in 2018, a rise of low carbon generation to some 52%, and 18 consecutive days of coal-free generation. It also recognises ongoing reform of the energy system to

deliver greater system flexibility in order to integrate significant quantities of low carbon generation.

UK Solar PV Strategy

5.2.19. The *UK Solar PV Strategy* is in two parts. *Part 1: Roadmap to a Brighter Future* (DECC, 2013) confirms that '*Solar PV is one of the eight key renewable energy technologies that can help to create a clean, balanced UK energy mix*'. It sets out four guiding principles:

- 'Support for solar PV should allow cost-effective projects to proceed and to make a cost-effective contribution to UK carbon emission objectives in the context of the overall energy goals – ensuring that solar PV has a role alongside other energy generation technologies in delivering carbon reductions, energy security and affordability for consumers;
- Support for solar PV should deliver genuine carbon reductions that help meet the UK's target of 15 per cent renewable energy from final consumption by 2020 and in supporting decarbonisation of our economy
- Support for solar PV should ensure proposals are appropriately sited, give proper weight to environmental considerations such as landscape and visual impact, heritage and local amenity, and provide opportunities for local communities to influence decisions that affect them; and
- Support for solar PV should assess and respond to the impacts of deployment on: grid systems balancing; grid connectivity; and financial incentives – ensuring that we address the challenges of deploying high volumes of solar PV.'

5.2.20. *Part 2: Delivering a Brighter Future* (DECC, 2014) includes a section on large-scale, ground-mounted solar PV schemes and records growth in deployment, scale and projects awaiting construction. Whilst recognising the opportunities for greater generation, it is acknowledged that large-scale solar developments can have a negative impact on the rural environment and on local communities. In this regard, the document sets out a list of ten commitments developed by The Solar Trade Association.

The Development Plan

5.2.21. The following policies are of particular relevance.

5.2.22. Bearing Fruits 2031: The Swale Borough Local Plan, adopted July 2017 (The Swale Borough Local Plan):

- Policy DM 20 - Renewable and low carbon energy.

5.2.23. In summary, this policy confirms that planning permission will be granted for the development of renewable and low carbon energy sources where various criteria can be met, including details of site restoration.

- 5.2.24. Canterbury District Local Plan, adopted July 2017:
- Policy CC1 – Renewable and Low Carbon Energy Production Development (apart from wind energy development).
- 5.2.25. This policy indicates that proposals for renewable sources of energy will be encouraged in appropriate locations subject to a commitment to remove large-scale installations after their use has ceased.

5.3. THE APPLICANT'S CASE

5.3.1. The Applicant has set out the case for the Proposed Development in:

- [APP-034]: Environmental Statement – Chapter 4: Site selection, development design and consideration of alternatives;
- [APP-035]: Environmental Statement – Chapter 5: Development description;
- [APP-036]: Environmental Statement – Chapter 6: Legislative and planning policy context;
- [APP-045]: Environmental Statement – Chapter 15: Climate Change;
- [APP-253]: Statement of Need;
- [APP-254]: Planning Statement;
- [APP-019]: Statement of Reasons; and
- [APP-020]: Funding Statement.

5.3.2. Documents subsequently submitted into the Examination by the Applicant on need included:

- [AS-008]: Statement of Need Addendum;
- [AS-037]: the Applicant's response to Deadline 3 submissions on Need;
- [AS-042]: Legal Submissions - Drax repower DCO decision and consultation by BEIS on energy storage;
- [REP2-018]: Response to the Examining Authority's Written Question - Appendix 12 Update to Appendix B of the Statement of Reasons;
- [REP2-036] to [REP2-041]: the Applicant's Response to GREAT's letter [AS-012] with appendices;
- [REP2-043]: ES Climate Change Chapter clarification note;
- [REP3-014]: Written Summaries of Oral Submissions from Issue Specific Hearing (ISH) 1 on Need; and
- [REP3-030] to [REP3-046]: The Applicant's Response to GREAT's Expert Report on the Statement of Need including appendices.

The Applicant Company

5.3.3. The Statement of Need [APP-253] explained that Cleve Hill Solar Park Ltd was a joint venture formed by two solar industry specialists, Hive Energy Ltd and Wirsol Energy Ltd. The Funding Statement [APP-020] indicated that the total estimated cost of the Proposed Development was approximately £450m. The Applicant confirmed that it had the ability to fund the proposed works and it was to be emphasised that the Proposed Development would be subsidy-free.

Climate Change and the Need for Low-carbon Generation

- 5.3.4. The Applicant's Statement of Need [APP-253], Planning Statement [APP-254] and Chapter 6 of the ES [APP-036] pre-dated the amendment to the Climate Change Act 2008, the Committee on Climate Change's *'Reducing UK emissions - 2019 Progress Report to Parliament'*, and the Government response, *'Leading on Clean Growth'* (October 2019).
- 5.3.5. However, the key points in support of the Application were:
- National Policy Statements support renewable energy development;
 - the UK has a legal commitment to decarbonise;
 - carbon reductions to date have been delivered by a different route than originally envisaged;
 - future demand for electricity is uncertain but growing;
 - decarbonisation can maintain or enhance security of supply;
 - large-scale solar PV generation assets are economically efficient; and
 - solar PV, when coupled with electricity storage, can offer important ancillary services to the system operator, supporting the integration of its renewable profile into the GB energy system.

UK Energy Markets – Grid Connection and Decentralisation

- 5.3.6. The Statement of Need [APP-253] confirmed that significant progress had been made in recent years in the UK in reducing carbon emissions from power generation. Renewable generation had expanded, and fossil fuel generation had contracted. NPS EN-1 predicts increasing demand for electricity as significant sectors of industry, housing and transport move towards electrification.
- 5.3.7. The Statement of Need [APP-253] also provided commentary on the operation of the power system. In short, in terms of security of supply, sufficient electricity generating capacity needs to be available to meet maximum peak demand with spare capacity to accommodate unexpectedly high demand or plant failures. Power demand and supply also needs to be balanced in order to maintain voltage levels and system frequency.
- 5.3.8. The electricity system in the UK consists of a high-voltage National Electrical Transmission Service (NETS) and a lower-voltage distribution network. Transmission-connected generators contribute to meeting national demand as and when required on instruction from National Grid and meet power demand and system security needs with the least possible cost. Distribution networks have smaller capacities than their transmission counterparts: they provide local distribution and connections for decentralised generation.

- 5.3.9. NPS EN-1, at paragraph 3.3.29, explains that the Government does not believe that decentralised and community energy systems are likely to lead to significant replacement of larger-scale infrastructure. Interconnection of large-scale, centralised electricity generating facilities through a high voltage transmission system enables the pooling of both generation and demand, which in turn offers a number of economic and other benefits. This includes more efficient bulk transfer of power that enables surplus generation capacity in one area to be used to cover shortfalls elsewhere.
- 5.3.10. Grid connection was an important factor in energy generation project timescales and costs and the availability of efficient grid connections allowed projects to come forward at lower costs of generation and lower costs to consumers. The Proposed Development Site had the strong advantage of an adjacent grid connection facility.

Low-carbon Generation and the Role of Solar PV

- 5.3.11. The Statement of Need Addendum [AS-008] explained that elements of the Government's Low Carbon Transition Plan (2009) had not materialised in the manner anticipated. In particular, carbon capture and storage technology had not yet progressed to industrial scale, and wave and tidal power, although proposed in several locations in the UK, had experienced cost and operational challenges.
- 5.3.12. In addition, the anticipated growth in new nuclear power generation had not progressed as anticipated, making it vitally important that other deliverable, fundable, affordable and beneficial technologies were consented as a priority.
- 5.3.13. The Proposed Development provided an opportunity to secure some 300MW to 400MW of unsubsidised, low-carbon solar PV generation that would meet Government objectives of delivering sustainable development, ensuring a secure energy supply and providing benefits to consumers.
- 5.3.14. In this regard, solar PV was seen to be of importance in maintaining a diverse and balanced mix of renewable energy assets in that both wind and solar PV are weather dependent and subject to variation and some unpredictability. However, in combination, the two technologies provided greater certainty in generation which, in turn, allowed a lower requirement for fossil-fuelled back-up plant.

Site Selection, Design and Layout

- 5.3.15. Chapter 4 of the ES [APP-034] reported that the Proposed Development Site was selected through an extensive search exercise undertaken by Hive Energy Ltd for large-scale, ground-mounted solar PV developments. The south of England was especially favoured due to its levels of solar irradiation. No other site was identified with comparable proximity to the 400kV National Electrical Transmission Service (NETS) and with available capacity to accommodate the scale of generation.

- 5.3.16. Further positive factors included:
- a predominance of open land and less than 10 dwellings within 200m of the site;
 - flat topography;
 - large, open fields separated by ditches;
 - a route for construction traffic previously used by the London Array substation;
 - absence of designated heritage assets within the site;
 - the site is predominantly Grade 3b agricultural land;
 - it is not a nationally designated landscape;
 - mitigation of effects on nature conservation designations could be secured;
 - appropriate measures could be put in place to mitigate flood risk; and
 - commercial terms had been agreed with the landowner.
- 5.3.17. A search [APP-201] of potential sites within 5km (the area beyond which grid connection becomes uneconomic) of Cleve Hill was made. No other viable sites were identified. Consideration of utilising the site and the Cleve Hill grid connection for other forms of low-carbon, subsidy-free, generation found potential alternatives to be impractical.
- 5.3.18. In the wider area, in response to consultation suggestions [APP-022], the Applicant assessed three specific locations [APP-034]. These were the former Kingsnorth Power Station and the Hoo peninsula; brownfield land on the Isle of Grain; and Canvey Island. All were found to have significant drawbacks and compared unfavourably with the Proposed Development Site. Further, many consultees' generalised preference for placing solar panels on roofs would not match the benefits offered by large-scale installations connecting to the NETS.
- 5.3.19. In terms of design and layout, the Applicant [APP-034] and [APP-035] had made a design decision to adopt an east-west orientation of solar PV arrays. Although the Applicant accepted that this was less efficient than a south-facing arrangement on a panel by panel basis, the chosen layout allowed a greater density of panels which more than compensated for the reduction in the energy generated by each individual panel. Configuration in this way would also have the advantage of spreading generation throughout the day, reducing the daily peak and trough associated with south-facing arrays.
- 5.3.20. The Applicant acknowledged that the chosen layout was not commonly used. However, it had experience of a scheme of some 35MW in the Netherlands that deployed this arrangement ([APP-035] Plate 5.6b).
- 5.3.21. In terms of the height of the panels [APP-035], the height above ground level would be in the range of 3m to 3.9m, with the lowest part of the modules 1.2m above ground level in order to safeguard flood sensitive equipment.
- 5.3.22. Overall, the Applicant considered that the location of Cleve Hill, with spare grid connection capacity, would be efficient and economic, and it would allow connection without significant delay.

Grid Connection and Grid Management

- 5.3.23. The ES [APP-034] explained that Cleve Hill was uniquely placed between interconnectors to and from Europe, with capability of managing bi-directional flows, and the high demand of London and the South East. The adjacent Cleve Hill substation had some 300MW to 400MW of unused and available transmission system entry capacity following the cancellation of Phase 2 of the London Array offshore windfarm.
- 5.3.24. Moreover, south-east England was an area of transient power flow, bordered by three other areas, with important implications for future power flow and operability. East Anglia was likely to become a significant power exporter; interconnections to Europe were set to increase; and London, the regional demand centre, was expected to retain low levels of generation.
- 5.3.25. The Applicant acknowledged that this had implications for grid management. However, it explained that UK Power Networks and National Grid, through their 'Power Potential' project, were seeking innovative solutions to increase import and export capacity of the south-eastern networks and to maintain a constant balance between local supply and demand by making best use of embedded flexibility and services to strengthen and support the NETS.

Battery Energy Storage Systems

- 5.3.26. The Applicant [APP-253] explained how the proposed battery energy storage system would be highly beneficial to national network stability. Although electricity storage was an emerging model, significant advances had been made in technology, cost and capability and there was an increasing appetite for delivering large battery projects (e.g. Orsted, Liverpool; RWE, Tilbury; Statera, Pelham; EDF Energy, West Burton; Centrica, Swindon; and Drax, North Yorkshire ([APP-253], Table 5.4)).
- 5.3.27. The Applicant pointed out ([APP-253], Table 5.5) that the co-location of solar PV generation and an energy storage system offered a number of services that would be important to the proper functioning of the electricity system. In addition, battery energy storage assets provided significant benefits in both decarbonisation and security of supply and in the overall cost of generation to the consumer.

The Cost of Solar PV

- 5.3.28. The ES [APP-034] explained that investment would only occur where developers believed that the project would make reasonable returns for its investors. Large-scale solar PV generation had economies of scale over small-scale solar PV installations, and large-scale solar PV was now 'super-competitive' against other conventional and renewable energy sources. Economies of scale and technological advances had reduced the cost of solar PV panels, increased their efficiencies and extended their useable lifetimes. Development costs had also fallen as a result of efficiencies emanating from experience of the build process. Battery costs were also predicted to fall.

5.3.29. The Applicant [APP-034] had undertaken a comparative costing of the solar PV element of the Proposed Development against spreading the same output over 4, 7 and 10 locations. Cleve Hill Solar Park would have a lifetime unit cost of £62.67 per MWh compared to unit costs ranging from £67.55 per MWh to £72.45 per MWh for the other scenarios. Overall, the liberal and commercial electricity generation market was likely to favour investment in larger, single installations in preference to multiple assets. The location of Cleve Hill, with spare grid connection capacity, would be efficient and economic, and it would allow connection without significant delay.

5.4. PLANNING ISSUES

Relevant Representations

- 5.4.1. A substantial number of Relevant Representations (RRs) raised one or more of the following general matters including:
- the large and unprecedented scale of the Proposed Development;
 - the lack of consideration of alternative sites, especially brownfield land;
 - the east-west orientation of the panels and the inability of vegetation to grow under them;
 - the height of the panels;
 - a preference for alternative energy sources; and
 - a lack of information relating to the proposals for battery energy storage and decommissioning and a lack of clarity on the lifetime of the project.
- 5.4.2. More specifically, and by way of example, Oare Parish Council [RR-052], raised concerns about the unknown effects of the east-west orientation of the panels.
- 5.4.3. Faversham Town Council [RR-274], in common with Helen Whately MP [RR-418], drew attention to the scale of the project and pointed to alternative brownfield sites with grid connection.
- 5.4.4. Graveney with Goodnestone Parish Council [RR-321] added concerns about the opportunist presence of spare grid connection capacity as the driver for the project and the need for careful examination of the battery storage element.
- 5.4.5. Canterbury District Green Party [RR-496] claimed that the primary interest of the developer was to make money, and much greater environmental gains would likely be achieved by alternative energy generation.
- 5.4.6. Swale Green Party [RR-711]:
- identified the primary role of offshore wind;
 - said it favoured local, small-scale deployment of solar PV;
 - considered the assessment of alternative sites to be arbitrary; and

- criticised battery storage as a means of exploiting fluctuations in the price of electricity.

- 5.4.7. Mr Lowe [RR-745], a strong supporter of renewable energy and solar PV, identified conflict with the aims of Government strategy; considered the site to be poorly located to serve demand; pointed to declining demand for electricity; and added that other locations and a mix of technologies would be preferable alternatives.
- 5.4.8. CPRE Kent [RR-751], in acknowledging the importance of decarbonised energy supply, was not satisfied that the Cleve Hill substation would provide the best possible location to connect such a large-scale facility.
- 5.4.9. The Graveney Rural Environment Action Team (GREAT) [RR-770] considered the proposal to be too large and in the wrong place.

Local Impact Reports

- 5.4.10. Swale Borough Council, in its LIR [REP1-005], set out the main factors for considering large-scale solar farms. It pointed to significant climate change benefits arising from the project and posed the question whether these would be more sustainably met by a series of smaller installations.
- 5.4.11. Kent County Council, in its LIR [REP1-004], acknowledged the positive aspect of clean, green, low-carbon generation and its contribution to a secure and stable energy source. It noted that this must be balanced against potential adverse environmental impacts.
- 5.4.12. Canterbury City Council took a similar stance in its LIR [REP1-002].

Other Representations to the Examination

- 5.4.13. Prior to the Issue Specific Hearing on Need (ISH1) [EV-006], we accepted GREAT's outline response [AS-012] to the Applicant's Statement of Need [APP-253] and related Addendum [AS-008]. It pointed to the importance of assessing whether there was a demonstrable need for the Proposed Development in order to weigh the outcome with its unacceptable adverse effects. Similar comments were raised by Faversham and Swale East Branch Labour Party [AS-013].
- 5.4.14. GREAT [AS-012] also highlighted deficiencies in the Applicant's Statement of Need, notably:
- a failure to explore the wider context of the Application properly;
 - a lack of recognition for what was happening elsewhere in the UK energy market;
 - whether the Proposed Development was a solution to the needs set out by the Applicant;
 - absence of a clear analysis to justify co-location of battery storage and the claimed benefits;
 - no evidence of discussion with National Grid as to the need for the project; and

- silence on what level of need is required to outweigh environmental and other damage.

5.4.15. Similarly, we accepted an expert's report [AS-035], commissioned by GREAT, on need. This challenged some of the claims made in the Statement of Need [APP-253] and in the Applicant's response to points raised by GREAT [AS-037]. It also pointed to a number of social and technical issues of concern that questioned the Applicant's case and the suitability of the Proposed Development in terms of its timing and location. We were also asked [AS-016] to examine the level of experience held by Hive Energy Ltd and Wirsol Energy Ltd.

Climate change and the need for low-carbon energy generation

5.4.16. A number of key themes emerged from the representations including:

- support for local and domestic solar PV generation [AS-035];
- the need for solar PV had already been met (4.83GW in planning - excluding the Proposed Development - against a projected need of 2.97GW – 2019 to 2022) [REP5-053];
- large-scale, offshore windfarms would compensate for the void in nuclear capacity and benefit from the Offshore Wind Sector Deal (March 2019) [AS-035];
- the favourable subsidy income stream for other technologies and the absence of subsidy for large-scale solar PV [AS-035] and [REP2-063];
- the long-term trend of reduced energy demand [REP2-063];
- other renewable technologies outperform solar PV generation [AS-035];
- the next cohort of wind farms is expected to achieve a capacity factor of 60%;
- offshore wind farms will become the backbone of zero carbon energy [REP7-082]; and
- solar PV is not zero carbon, or the lowest carbon source of energy, as the processes needed to manufacture, install, operate and ultimately dispose of the system cause emissions [REP7-082].

The UK energy market - grid connection and decentralisation

5.4.17. The main points from the representations were:

- the growth in large-scale solar PV capacity was likely to set future challenges for managing the grid and preclude connections from decentralised generation and local distribution which offer social, economic and environmental benefits ([AS-035], [REP2-063] and [REP3-033], Table 5.1);
- south-east England had a highly complex distribution network, Cleve Hill was remote from centres of demand, the Proposed Development would take all spare grid capacity, and future connections would incur high reinforcement costs [AS-035] and [REP2-063];
- the connection offer from National Grid was not an endorsement of the project and connection applications should be assessed by more equitable means [AS-035];

- the Proposed Development would be an inefficient use of spare grid capacity as the average capacity factor for solar PV in Britain was 10.8% in 2018 [AS-035];
- further inefficiencies would arise from transmission losses that could be minimised by local generation and distribution with allied smart technology [REP4-059];
- spare capacity at Cleve Hill substation should be reserved for repowering the Kentish Flats wind turbines [REP7-082];
- consumers should be encouraged to use less electricity, demand side response should be encouraged, and distributed renewable energy should be preferred to large scale projects [REP7-082];
- the electricity market was undergoing rapid change ([REP2-063], references 8 to 16) and, with increasing flexibility, wholesale electricity prices would fall corresponding with a decline in demand [REP2-063];
- a number of initiatives by energy providers (e.g. OVO's 'Plan Zero') would add more than enough low carbon electricity to meet falling electricity demand and at lower costs than the Proposed Development [REP7-082]; and
- National Grid was implementing measures to increase provision of supply and demand facilities on the distribution networks rather than traditional grid-connected supplies [REP7-082].

The role of solar PV

5.4.18. The other representations to a large extent overlapped earlier themes but are summarised for completeness:

- solar power does not effortlessly plug into the current and future energy mix of the UK, it faces tougher competition and economic conditions following the removal of subsidies, the demand for energy is falling, and rapid changes are occurring in the electricity market [AS-035];
- solar PV projects should be evaluated as a 'no-regrets' action with low impact on the UK energy system, low levels of carbon emissions and facilitating higher levels of decentralisation [AS-035];
- solar PV schemes using commercial roofs were becoming more cost-competitive [REP2-063]; and
- solar PV would not lower consumer bills as the technology was not the cheapest, and offshore wind had the potential to pay some £600m towards consumer bills by 2027 [REP7-082].

Solar PV and battery energy storage

5.4.19. GREAT [AS-035] explained that the range of economic, social and technical benefits from co-locating battery storage with large scale solar PV, outlined in the Statement of Need [APP-253], were not currently achievable under the existing regulatory and market structures and any anticipated changes were unlikely to be in place before the commissioning of the Proposed Development.

5.4.20. Therefore, this raised doubts about the feasibility of, and the need for, the project and, without costing details, it was impossible to assess the benefits of co-location. Mr Lowe [REP2-063] considered that battery

energy storage would not be viable after a few years due to increased storage from other sources.

- 5.4.21. CPRE Kent [REP7-082] contended that the Proposed Development would only contribute to security of supply if the battery energy storage system was implemented. The batteries would add to the carbon footprint of the Proposed Development.

Site selection, design and layout

- 5.4.22. Mr Lowe [REP2-063] was of the view that sites at Kingsnorth, the Hoo Peninsula and the Isle of Grain would be nearer to areas of higher power demand, and it would make more sense to build the cancelled second phase of the London Array offshore wind farm [REP4-059]. He also challenged the Applicant's claim that Cleve Hill offered the best option for grid connection as capacity was available at Kemsley, Isle of Grain and Kingsnorth [REP2-063].

- 5.4.23. A number of IPs (e.g. [RR-398]) referred to the 'novel' layout of the Proposed Development, and the unknown effects of an east-west orientation of panels.

Viability of the Proposed Development

- 5.4.24. GREAT [AS-035] urged caution in using the levelised¹⁰ cost of energy to assess the viability of the Proposed Development and set out a case for a whole system approach. It pointed out that the exclusion of the storage element in the Applicant's appraisal was a significantly limiting element: appraisal should reflect the levelised cost of delivery, which includes such things as grid integration, system costs, technology types, externalities and the daily variation in demand and supply.

Drax Repower DCO

- 5.4.25. CPRE Kent [REP7-082], in response to the Applicant's [AS-042] legal submissions on the Drax Repower DCO, pointed out the possibility of the decision being subject to Judicial Review and the lack of comparison between the Drax and Cleve Hill proposals.
- 5.4.26. It went on to suggest that, contrary to the Applicant's claim, the issue of need was entirely relevant insofar as there would be no market for generation which produced electricity at higher costs than other sources of supply [REP7-082].

5.5. ExA RESPONSE

Introduction

- 5.5.1. In light of the RRs, requests made at the PM, and in the context of s105 of the PA2008, we decided to examine 'Need' at an ISH [PD-005] 'with

¹⁰ A levelised cost is the average cost of the lifetime of the plant per MWh of electricity generated. It reflects the cost of building, operating and decommissioning a generic plant for a particular technology.

specific reference to: the Applicant's Need Statement; the relevant Policy Framework; the need for the proposed development having particular regard to its design and scale; the extent to which alternative technologies and alternative sites are relevant to the application proposal; and the Applicant's experience of large scale solar PV projects'.

- 5.5.2. Additional Submissions (e.g. [AS-012], [AS-015] and [AS-035]) were also available to inform the oral examination.
- 5.5.3. We have also taken account of subsequent representations, including GREAT's submission [REP4-067] responding to the Applicant's Deadline 3 response [REP3-014] and [REP3-030] and following OFH3 [REP5-044], citing litigation involving Wirsol Energy Ltd, and the additional information in CPRE's Deadline 7 representation [REP7-082].
- 5.5.4. We also took the opportunity to examine the safety aspects of the battery energy storage system further as part of ISH6 on Environmental Matters [EV-023]. This is discussed in Chapter 8 of our Report at section 8.7.

The Applicant's Experience of Large-scale Solar PV and Battery Energy Storage Developments

- 5.5.5. We were informed by the Applicant [REP3-014] that Hive Energy Ltd was founded in 2010. It has developed more than 300MW of solar PV in the UK, including what was, in 2015, the largest solar farm in the UK, with a generation capacity of 48MW. The company was in the process of constructing some 60MW solar PV in Cuba and it had a pipeline of other projects around the world [APP-019]. Hive Energy Ltd has sold a number of its projects to Wirsol Energy Ltd.
- 5.5.6. We were also told that Wirsol Energy Ltd had design and build expertise. Hive Energy Ltd was typically a developer and Wirsol Energy Ltd was a constructor, having built some 1.9GW of wind and solar worldwide. The company had constructed 160MW in the UK and some 397MW in Australia [APP-019].
- 5.5.7. GREAT [REP5-044] challenged what we were told at ISH3 and alleged that Hive Energy Ltd assembled projects and sold them to others to build. It suggested that Wirsol Energy Ltd's track-record was unreliable in that its business model was over-exposed, it had not submitted its most recent accounts and the company was facing court proceedings relating to contractual obligations following the sale of assets to another party.
- 5.5.8. It is clear to us that both Hive Energy Ltd and Wirsol Energy Ltd have relevant expertise in their own fields and it is not unknown for promoters to rely on partner developers. We accept that neither company can point to comparable experience in developing a solar power generating station and battery energy storage system of a similar scale, design, layout and locational characteristics to the project before us. However, that is not to say that these factors inevitably present insurmountable issues that

cannot be resolved by the developer through the procurement of relevant specialist advisors and contractors.

- 5.5.9. We are satisfied that the ability to finance the project has been demonstrated in the Funding Statement [APP-020]. In addition, it is good business sense for a developer to reserve its position on a final business model to be determined, if Development Consent is granted, having regard to a variety of commercial, financial and market considerations.
- 5.5.10. In terms of the possibility of the Applicant seeking to dispose of its interest in the Proposed Development, Part 2, paragraph 5, of the Recommended DCO (Appendix C(i) to our Report), under the heading 'Benefit of the Order' provides, in short, for the Applicant (referred to as the 'undertaker') to transfer or lease to another person any or all of the benefits of the provisions of the DCO subject to the prior written consent of the Secretary of State (SoS). We are content that this would provide appropriate safeguards.
- 5.5.11. In terms of the litigation, the Applicant [REP6-015] explained that GREAT's understanding was incomplete in that the legal proceedings were initiated by Wirsol Energy Ltd and the documents relied on by GREAT were a counterclaim. The claims awaited to be heard and determined and guaranteeing surety of the other party's costs was normal in such actions. We take the view that the allegations made by GREAT lack materiality in the consideration of the Application and there is nothing to cast doubt on the financial standing of the Applicant.

Climate Change and the Need for Low-Carbon Energy Generation

- 5.5.12. We are aware that there has been long-standing recognition of the need to decarbonise energy generation as one of the means of combatting the adverse effects of climate change. The Climate Change Act 2008, as amended, sets a new Net Zero emissions target by 2050 [REP3-030].
- 5.5.13. In July 2019, the Committee on Climate Change published its 2019 Progress Report to Parliament on reducing UK emissions [REP3-032]. This indicated that the new target was achievable with known technologies, alongside improvements in people's lives. It also explained that decarbonisation of the power sector and more rapid electrification must be accompanied with greater build rates of low-carbon generation capacity, supplemented by measures to enhance the flexibility of the electricity system to accommodate a high proportion of variable generation.
- 5.5.14. July also saw the publication of National Grid's *Future Energy Scenarios* (FES 2019) [REP3-033], which aims to stimulate debate about the energy system of the future, a few days before our ISH on Need. Although participants had prepared primarily against the background of FES 2018, the discussion and subsequent representations reflected the later version.

- 5.5.15. The Introduction to FES 2019 states:
- 'Decarbonising energy is fundamental in the transition towards a sustainable future. Our Future Energy Scenarios aim to stimulate debate to inform the decisions that will help move us towards achieving carbon reduction targets and, ultimately, shape the energy system of the future'.*
- 5.5.16. We are conscious of the amount of solar PV generation that FES 2019 envisages will be required to be completed by 2022, as indicated by The Faversham Society [REP3-070], [REP5-053] and [REP7-090]. However, the purpose of the document is to present credible scenarios for the next 30 years and beyond. These are intended to be of utility in exploring different options and opportunities for the future. It is explicitly stated that the four scenarios are not, in themselves, forecasts or expected pathways. We cannot therefore interpret the anticipated required completion of solar PV capacity to be anything more than indicative.
- 5.5.17. Further, although The Faversham Society contended that the potential capacity of projects in the planning system far exceeded the short-term outlook of FES 2019, we consider that it would be a step too far to assume that all those projects will be approved, or that all of those approved will be implemented within the relevant timescale or indeed at all.
- 5.5.18. Moreover, Government policy in Part 3 of NPS EN-1 makes clear that *'it is for industry to propose new energy infrastructure projects within the strategic framework set by Government. The Government does not consider it appropriate for planning policy to set targets for or limits on different technologies.'* Thus, even if the figures relied on by The Faversham Society [REP5-053] were to be accepted on their face, Government policy tells against the exercise which the Society has undertaken.
- 5.5.19. On this basis, we disagree with the proposition that the additional capacity from the Proposed Development is not required in a market-based system of energy provision and the move towards decarbonisation.
- 5.5.20. We observe that a number of representations (e.g. [REP2-110], [REP3-070] and [REP3-085]) point to the role of, and preference for, small-scale solar PV installations. Although FES 2019 sets out a scenario for community renewables that anticipates a significant role for domestic solar PV, rather than large-scale projects connected to the transmission system, this does not by itself deny the ongoing need for large-scale solar PV as all four scenarios show that solar capacity is set to grow, albeit to varying degrees.
- 5.5.21. We have noted the ongoing role of offshore wind consistent with the anticipation of FES 2019:
- 'Offshore wind dominates the future growth of renewables, thanks to continued reductions in cost, turbine and supply chain developments and government support through the recently signed Sector Deal Overall*

wind capacity increases significantly in all scenarios, with capacity almost doubling by 2030 even in the scenarios with lowest growth'.

- 5.5.22. We are mindful that financial incentives (e.g. [REP2-063]) are available to offshore wind. However, there is nothing to suggest that these incentives are intended to impede the complementary contribution of solar PV. In this regard, it is evident that the withdrawal of the fiscal incentive for solar PV was a consequence of the original supporting mechanism having achieved its objective. Notably, the technology had matured and expanded well-beyond its once small-scale abilities, and it no longer needed on-going Government support [REP3-037].
- 5.5.23. Irrespective of the undeniable importance of offshore wind, Part 3 of NPS EN-1 highlights the need for all the types of energy infrastructure covered by the NPS for energy security and to reduce greenhouse gas emissions dramatically. Although CPRE Kent [REP7-082] claimed that the Proposed Development, as a stand-alone solar PV installation without the battery energy storage system, would not contribute to security of supply, the same would be true of any intermittent source of generation considered in isolation. In this regard, it is anticipated that security of supply can be derived from a mix of complementary technologies.
- 5.5.24. Whilst NSIP-scale solar PV is not described within NPS EN-1, because of its relative immaturity in 2011, the technology and economics have subsequently advanced significantly. There is now no real impediment to solar PV complementing other forms of low-carbon generation in the quest to meet Government objectives. Indeed, solar PV, especially with related energy storage ability, would offer a greater balance and reliability of supply, especially when offshore wind generation is hindered by weather conditions.
- 5.5.25. A number of representations pointed to the reduction in demand for energy and procurement in excess of demand by National Grid, over a significant number of years. However, we are conscious that, moving forward, the trend is predicted to be upward as more heating and transport moves to electrification.
- 5.5.26. Although a number of representations (e.g. [REP2-063]) set out to show that the Proposed Development was not needed, in our view, taking the totality of Government policy and guidance there remains a strong need for a mix of renewable energy projects and that mix should include a continuing role for large-scale solar PV.

The UK Energy Market - Grid Connection and Decentralisation

- 5.5.27. We are alert to the complexities of the National Electricity Transmission Service (NETS) in south-east England [AS-035] and [REP2-063]. However, there is spare capacity at Cleve Hill to accommodate the proposed solar PV park, as a result of the cancellation of Phase 2 of the London Array offshore wind farm [APP-034].

- 5.5.28. The Proposed Development would connect to the NETS through Cleve Hill substation. The Applicant has obtained a contractual agreement with National Grid in the form of a grid connection offer which the Applicant had accepted in October 2019 [APP-029]. In making that offer, we are confident that National Grid would have assessed that connection was possible without detriment to statutory limits and the rights of other users of the system.
- 5.5.29. Although the offer will preclude other connections at Cleve Hill, without upgrading the system, we consider that it would not make sense to deny development consent for a major national infrastructure project in favour of yet unknown, unquantified and uncertain local or other technology generation. In our opinion, such an approach would frustrate the objective of boosting renewable energy generation.
- 5.5.30. We would also point out that small-scale projects are unlikely to be prejudiced as their connection would generally be to the distribution network rather than the NETS.
- 5.5.31. Further, in relation to the concerns about the operation of the grid in south-east England, FES 2019 confirms that supply patterns are generally changing, resulting in more complex and volatile flows of electricity over the whole energy system. It is known that increased intermittency from renewables and diversification of supply sources play a role in this.
- 5.5.32. However, we were told [REP3-030] that National Grid was pioneering the Power Potential project with UK Power Networks to create a new reactive power market for distributed energy resources and to generate additional capacity of up to 4GW in the South East region of the UK.
- 5.5.33. In the knowledge of this project, and the absence of any objection from the relevant statutory undertaker, we are satisfied that the Proposed Development would not result in any insurmountable issues for managing the grid or for bringing forward local projects and securing their recognised role in reducing carbon emissions.
- 5.5.34. We are mindful of the arguments that a solar PV installation would not be an efficient use of spare grid capacity at Cleve Hill. However, that might only be material if there were one or more known competing projects that would deliver greater benefits. That is not the situation and, as set out in Chapter 6 of the ES [APP-034], the Applicant has considered and, in our view, correctly ruled out possible alternative technologies for utilising the existing connection capacity.
- 5.5.35. We accept that transmission over long distances has inherent inefficiencies [REP2-063]. However, NPS EN-1 endorses the principle of the large-scale deployment of renewable energy projects and recognises (paragraph 3.7.1 - Footnote 58) that: *'..... new renewable generation, e.g. wind is likely to be developed in locations much further from demand, such as in rural Scotland and offshore, while other low carbon generation is also likely to be sited in more peripheral areas.'* We

perceive no material disadvantage in terms of the Proposed Development Site insofar as it enjoys relative proximity to centres of population and London in particular.

- 5.5.36. We recognise the way in which the pattern of generation is changing and the fundamental changes to the electricity market through modernisation. However, that is not to say that large-scale solar PV no longer has a part to play alongside local and domestic generation in the overall quest for decarbonisation. It is apparent, however, that despite the fall in electricity consumption in recent years, future projections are manifestly upward, and significant additional generation capacity will be required.
- 5.5.37. Overall, we are satisfied that there is an available grid connection for the Proposed Development; the project would not cause insurmountable issues for the operation of the NETS; and it would not displace more local schemes and initiatives.

The Role of Solar PV

- 5.5.38. The *UK Solar PV Strategy Part 1: Roadmap to a Brighter Future* (UK Solar PV Roadmap) provides four guiding principles that form the basis of the Government's strategy for solar PV. We find no conflict with Principles I and II, in that the Proposed Development would be affordable and cost-effective, without the need for subsidy, and it would deliver significant carbon reductions [APP-253].
- 5.5.39. Principle III relates to land use and environmental considerations which we address in Chapters 6 to 8 below.
- 5.5.40. The fourth principle highlights the need to address the challenges of deploying high volumes of solar PV and managing grid systems, balancing and connectivity. We were told by the Applicant that the rationale for the east-west alignment of the solar PV panels was to ensure a more even pattern of energy generation throughout the day in order to minimise impacts on the grid.
- 5.5.41. We have examined grid connectivity in the preceding section. We also note that the UK Solar PV Roadmap, (Section 3 – Setting Future Policy Direction) indicates that '*DECC and partners will work to explore measures and technological advances to manage grid system balancing with increasing levels of solar PV*'. It does not list express criteria for the consideration of large solar PV projects or undermine our findings above.
- 5.5.42. Whilst we acknowledge GREAT's [REP4-067] point about a no-regret renewable energy pathway for solar PV, the context for the Proposed Development is one where the proposal offers subsidy-free generation to power some 90,000 homes and thus a significant contribution in terms of renewable energy generation. Further the claim that it would deny opportunities for decentralised generation is not well-founded.
- 5.5.43. Although the Applicant has not provided technology-specific details of the components of the development, we do not regard lack of specificity at

this stage to be uncommon as solar PV technology is still evolving. Assumed levels of efficiency will also be commercially sensitive. What might have been the most efficient type of solar PV panel at the point of Application, or in earlier assessments to inform the Application, may not be so now. There may well be further significant advancement at the point of detailed design and the procurement of solar PV panels.

5.5.44. We recognise that geographical location, distinct local weather patterns, pollution levels, and damage to or failure of key components are some of the important factors influencing the overall effectiveness of solar PV. However, these are generic considerations and we find no evidence to show that any of these factors would render Cleve Hill to be an unsuitable location for a solar PV project.

5.5.45. We have reflected on the role of solar PV schemes using commercial roofs. Whilst we recognise the potential of such opportunities, the Proposed Development has to be considered on merit. There is no 'alternative' commercial rooftop scheme and such schemes could, in any event, proceed in parallel with the proposal and would be consistent with the overall need case set out in NPS EN-1.

Solar PV and Battery Energy Storage

5.5.46. The Applicant acknowledged that the economic, social and technical benefits from co-locating battery storage with large-scale solar PV, outlined in the Statement of Need [APP-253], were not currently achievable under the current regulatory and market structures. However, it is to be noted that both the Department for Business, Energy and Industrial Strategy (BEIS) [REP3-040] and Ofgem [REP3-041] have issued consultations on energy storage in 2019, following an earlier joint publication, *Smart Systems and Flexibility Plan*.

5.5.47. The latter provides relevant background:

'Our energy system is changing New technologies such as storage are emerging and the costs of many of these technologies are falling rapidly There are also fundamental changes taking place within the energy markets, which will see new sectors, technologies and services flourish. Changes that improve access to these markets for smart businesses will enable them to compete fairly and reduce costs for consumers'

5.5.48. National Grid's *System Needs and Product Strategy* ([APP-253], Bibliography [23]) has similar direction:

'As the UK moves to a low-carbon economy, the way we operate the electricity system is evolving. A smart, flexible system that makes the best use of all the energy resources available will enable us to meet our customers' needs in a balanced, efficient and economical way'.

5.5.49. Whilst such changes might not be in place before the commissioning of the Proposed Development, we take the view that innovation requires forethought and to some extent calculated risk. In this regard, the

Applicant is putting forward a scheme with flexibility, with certain aspects inevitably covered by commercial sensitivity. It seeks the option, in effect, of reserving its position on the battery energy storage system with the alternative of additional solar PV panels. In an environment of potentially rapid change, and the lead-in time of an NSIP project, it is not unreasonable for the Applicant to seek appropriate flexibility. In our view, having considered the detailed representations, we are satisfied that the Applicant's appraisal of both of its options is reasonable in the circumstances.

- 5.5.50. Further, all of the potential barriers to co-locating solar PV and battery energy storage referred to by GREAT [AS-035] are in the public domain. It is apparent to us that the Applicant is fully aware of how each of these might influence its decision, in due course, whether to proceed with the battery energy storage system. We take reassurance from the Applicant's response [REP3-030].
- 5.5.51. The Applicant drew on the April 2018 draft guidance from Ofgem [REP3-042] on the principles of co-location of electricity storage with reference to the Renewables Obligation (RO) and Feed-in Tariff (FiT) accredited facilities. Although the RO and FiT programmes are now closed, the 'direction of travel' appears to us to be a growing recognition and acceptance of smart technologies like storage and co-location with generating assets.
- 5.5.52. The Applicant also pointed to National Grid's *Transmission Entry Capacity Register* (July 2019) [REP3-043]. This lists approved connections to the NETS and shows 90MW of storage already connected, with a future connection pipeline of 2.6GW. This supports the Applicant's view that, despite regulation and market uncertainties, developers appear already to have an appetite for battery energy storage at scale.
- 5.5.53. In terms of the viability of battery energy storage, the January 2019 *Network Options Assessment* from National Grid [REP3-045] identifies the need for two reinforcement projects in south-east England, one of which is intended to be a 'commercial solution' rather than direct network reinforcement.
- 5.5.54. National Grid is also engaged in a '*Constraining Management Pathfinding Project*' [REP3-046]. The guidance document explains:
- 'The energy industry is fundamentally changing. New technologies and ways of working are bringing opportunities to deliver great value, for consumers and society. We are driving competition through the access of a wider pool of solutions to meet network needs ensuring lower network constraint costs to unlock additional consumer benefit. We need to work with market participants to manage network constraints across the network, ensuring efficient outcomes are realised for the end consumers and system security is maintained.'*
- 5.5.55. In our view, initiatives such as these point to a significant change in the electricity sector as a whole in seeking to manage generation and network operation. This adds weight to the Applicant's optimistic outlook.

Site Selection, Layout and Design

- 5.5.56. A description of the site selection process and an analysis of alternative sites was provided in Chapter 4 of the ES ([APP-034], sections 4.2 and 4.4). We are satisfied that the analysis of alternative sites was robust, and we take no issue with its conclusions. We find nothing to suggest that any of the alternative sites would offer similar benefits within a comparable timescale to those outlined for the Proposed Development.
- 5.5.57. From the representations and our unaccompanied inspection [EV-002], we recognise that the Proposed Development Site covers a very extensive area. The size of the proposal is to some degree a factor of spare grid capacity at Cleve Hill. We look at the topic-specific implications in Chapters 6 to 8 of our Report.
- 5.5.58. We acknowledge that the east-west orientation of solar PV arrays is relatively uncommon. However, in terms of technology, construction and operation, the alignment of the arrays is immaterial. Whilst we note the general principle that south-facing panels individually have greater efficiency, the spacing and density of the east-west arrangement is said to compensate for any reduction in efficiency. We also understand that the resultant spread of generation across the day has advantages for the operation of the grid.
- 5.5.59. We are satisfied that the panel heights above ground level are determined by the need to safeguard sensitive electrical apparatus from possible flooding as described in Chapter 8.
- 5.5.60. The question of whether sufficient light will pass through the solar PV panel tables to support plant growth is informed by the Applicant's microclimate and vegetation desk-based study [APP-204]. This acknowledges that light penetration under the panels could be very low, resulting in a suite of potential vegetation responses with outcomes dependent on subsequent seeding and management regimes. We are content that an appropriate scheme can be secured through Requirements 5 and 6 of the Recommended DCO, as set out in Appendix C(i) to our Report, following the principles of the outline Landscape and Biodiversity Management Plan [APP-203].
- 5.5.61. With regard to the concerns about the battery energy storage system, these related principally to the safety of the proposed installation, which we discuss in Chapter 8 of this Report.

Viability of the Proposed Development

- 5.5.62. Although we did not identify the viability of the Proposed Development in our Initial Assessment of Principal Issues (IAP), we reviewed the main arguments in light of the representations raised.
- 5.5.63. In terms of the overall appraisal, the Applicant relied on its Statement of Need [APP-253] by reference to the levelised cost of energy methodology and a globally recognised source of comparative analysis, which confirmed that large-scale solar PV generation was cheaper than small-

scale solar PV generation, and that the former was now super-competitive against other conventional and renewable energy sources. Another source corroborated falling costs, including those of battery energy storage. The Applicant's four scenarios of different sized installations ([APP-253], Tables 6.1 and 6.2) reflect the benefits in economies of scale.

- 5.5.64. We were told by the Applicant in ISH1 [REP3-014] that the viability of the project was not dependent on the battery energy storage system. The rationale for the storage element was to secure future-proofing and it reflected the move in the industry to adopt storage. Whilst it was acknowledged that there remained doubts about the viability of battery storage in its own right, the viability of the Proposed Development had been established on the solar PV element alone.

Other Matters

- 5.5.65. Some representations suggested that the Proposed Development would not reduce the cost of electricity to consumers based partly on the proposition that consumers would be better served by domestic or local generation and that further large-scale, offshore wind farms will deliver substantial savings. IPs (e.g. [RR-007]) also suggested that the battery energy storage system would benefit the developer as a means of withholding output until 'the price is right'.
- 5.5.66. However, generation from the Proposed Development will be available on instruction from the National Grid and it would be capable of displacing more expensive forms of generation, as explained by the Applicant in the Statement of Need [APP-253]. The cost of electricity is ultimately a factor of the efficient operation of the electricity market and the manner in which it ensures competitive prices for the consumer.
- 5.5.67. Overall, we are of the view that a large, unsubsidised solar park, as proposed, irrespective of whether it includes a battery energy storage facility, would contribute to a key aspect of Government policy in delivering a cost-effective contribution to decarbonising the electricity sector and delivering power at the lowest possible cost. This is a matter to which we attach substantial weight.
- 5.5.68. Moreover, the proposed battery energy storage facility has the ability to store energy generated by the proposed solar park that is not immediately required for transmission, and it will assist in the balancing and management of the National Grid. These factors add to the substantial weight that we have identified for a stand-alone solar park.
- 5.5.69. Finally, having regard to policy DM 20 (10) of The Swale Borough Local Plan and policy CC1 of the Canterbury District Local Plan, we are satisfied that Requirement 17 of the Recommended DCO, as discussed more fully in Chapter 12 and set out in Appendix C(i) of our Report, will provide the mechanism to secure the future decommissioning of the Proposed Development.

5.6. CONCLUSIONS

5.6.1. Taking all relevant written and oral material into account, we conclude that:

- the Proposed Development is consistent with Government policy, which identifies a need for low-carbon and renewable energy NSIPs in order to address climate change, to meet the legal commitment to Net Zero, and to ensure a secure, diverse and affordable energy supply;
- Government policy requires a mix of renewable energy projects, without preference for technology or scale, to achieve these objectives;
- there is no 'in principle' basis to oppose the scale, design or layout of the Proposed Development;
- other potential locations have been evaluated for the purpose of EIA and found to lack equivalence;
- the Proposed Development Site is uniquely placed to take advantage of spare grid capacity, with ease of connection to the NETS, the Applicant has an extant connection offer, and there is no evidence to show that the Proposed Development would either compromise the operation of the NETS or preclude small-scale, local generation;
- the co-location of the battery energy storage system reflects a developing trend that will offer flexibility in operation and maximise energy resources in a balanced and efficient way; and
- there is no evidence to demonstrate the Applicant would be unable to undertake the Proposed Development or to counter its assessment of viability.

5.6.2. In light of the foregoing, we attribute substantial weight to the contribution that the Proposed Development, insofar as it relates to the solar PV element, would make towards the identified need for additional renewable energy generation, consistent with local and national policies on sustainable development. We regard the proposed co-located battery energy storage system to be a factor of significant additional weight.

6. FINDINGS AND CONCLUSIONS IN RELATION TO LANDSCAPE AND VISUAL EFFECTS

6.1. INTRODUCTION

- 6.1.1. This section addresses the effects of the Proposed Development on the landscape and views, including seascapes and glint and glare from the solar panels. Issues relating to historic landscapes are dealt with in section 8.2, Cultural Heritage.

6.2. POLICY CONSIDERATIONS

National Policy Statements (NPSs)

NPS EN-1

- 6.2.1. Virtually all nationally significant energy infrastructure projects will have effects on the landscape (5.9.8). They should be designed carefully to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate. The existing character and quality of the local landscape, how highly it is valued and its capacity to accommodate change should all be considered in judging the impact of the Proposed Development.
- 6.2.2. Application documents should include an appropriate landscape and visual assessment. The NPS refers to the use of good practice guidance in this regard (5.9.5). Reference should be made to any landscape character assessment and associated studies as a means of assessing landscape impacts and should take account of local plan policies based on those assessments.
- 6.2.3. Decision-makers should have regard to the purposes of nationally designated areas when considering applications for projects inside or outside their boundaries, if impacts are possible (5.9.9 to 5.9.13).
- 6.2.4. Energy infrastructure is likely to have visual effects for many receptors around proposed sites (5.9.18). Coastal areas are particularly vulnerable because of the potential high visibility of development on the foreshore, on the skyline and affecting views along stretches of undeveloped coast.
- 6.2.5. Reducing the scale of a project can help to mitigate visual and landscape effects, but this may result in a significant operational constraint and reduction in generation output (5.9.21). Adverse landscape and visual effects may be minimised through appropriate siting, design and landscaping schemes (5.9.22).

NPS EN-5

- 6.2.6. Specific landscape and visual considerations apply to electricity networks infrastructure (2.8): these supplement the generic landscape and visual

effects that are covered in NPS EN-1. In general, the emphasis is on overhead lines.

- 6.2.7. There is a need to balance the economic, social and environmental impacts associated with undergrounding (2.8.9), and there may be positive landscape and visual benefits from the reconfiguration of existing electricity network infrastructure (2.8.3).

National Planning Policy Framework (NPPF)

- 6.2.8. Chapter 15 of the NPPF contains overarching policies for conserving and enhancing the natural environment. It indicates that planning decisions should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, recognising the intrinsic character and beauty of the countryside, and maintaining the character of the undeveloped coast.

The Development Plan

- 6.2.9. Given its relevance and importance, the following development plan policies are considered particularly pertinent:
- 6.2.10. Bearing Fruits 2031: The Swale Borough Local Plan, adopted July 2017;
- Policy DM 20 – Renewable and Low Carbon Energy;
 - Policy DM 22 – The Coast;
 - Policy DM 24 – Conserving and Enhancing Valued Landscapes.
- 6.2.11. In summary, these policies address the need to assess and mitigate landscape and visual impacts to acceptable levels. Policy DM 22 specifically refers to the protection, enhancement or management of seascape. For proposals affecting Areas of High Landscape Value (AHLVs) at the Kent or Swale level, policy DM 24 seeks a demonstration of the conservation and enhancement of the landscape and that the scale, layout and design of the proposals has been informed by landscape and visual impact assessment that has regard to the Council's Urban Extension Landscape Capacity Study and Landscape Character and Biodiversity Appraisal SPD.
- 6.2.12. Canterbury District Local Plan, adopted July 2017;
- Policy CC1 – Renewable and Low Carbon Energy Production (apart from wind energy development);
 - Policy DBE2 – Renewable Energy;
 - Policy LB2 – Areas of High Landscape Value;
 - Policy LB3 – Undeveloped Coast;
 - Policy LB4 – Landscape Character Areas.
- 6.2.13. In summary, these policies promote the development of renewable energy projects in appropriate locations, subject to an assessment of impacts relating to, inter alia, landscape character, landscape designations and residential amenity. LB4 requires that proposals should demonstrate that they are informed by, and are sympathetic to, the

landscape character of the locality. LB2 includes specific reference to The North Kent Marshes AHLV, while LB3 refers to 'unspoilt scenic quality'.

Other Policy

Marine Policy Statement

- 6.2.14. At 2.6.5.1, the Marine Policy Statement notes that the effects of coastal developments on the landscape and seascape will vary on a case-by-case basis according to the type of activity, location and setting.
- 6.2.15. In considering the impact of a proposed development on seascape, existing character, quality, value and its capacity to accommodate the change caused by the development should be taken into account (2.6.5.3).

6.3. THE APPLICANT'S CASE

- 6.3.1. The principal Application documents relating to landscape and visual issues were:
- [APP-037]: Environmental Statement – LVIA Chapter;
 - [APP-054]: Environmental Statement – LVIA Figures;
 - [APP-063] to [APP-108]: Environmental Statement – Viewpoint photography;
 - [APP-109] to [APP-196]: Environmental Statement – Photomontages;
 - [APP-203]: Environmental Statement – Outline Landscape and Biodiversity Management Plan;
 - [APP-207]: Environmental Statement – ZTV, Photography and Photomontage Methodology;
 - [APP-208]: Environmental Statement – Assessment of Potential Landscape Effects;
 - [APP-209]: Environmental Statement – Assessment of Potential Visual Effects;
 - [APP-210]: Environmental Statement – Residential Visual Amenity Assessment;
 - [APP-232]: Environmental Statement – Additional Visualisations;
 - [APP-246]: Environmental Statement – Glint and Glare Study.
- 6.3.2. Documents subsequently submitted into the Examination by the Applicant relating to landscape and visual issues include:
- [REP2-006]: the Applicant's response to ExQ1, which includes a section on landscape and visual matters;
 - [REP2-021] to [REP2-023]: corrected the photomontages for Viewpoint 22;
 - [REP2-024]: detail of the plant growth assumptions used in photomontages;
 - [REP2-025]: glint and glare guidance used in the assessment;
 - [REP3-027], [REP4-029] and [REP5-025]: cross-sections;
 - [REP4-031]: Theoretical Site Visibility from Viewpoint 14, the churchyard of the Church of St Thomas the Apostle, Harty.

Methodology and Approach to the LVIA

- 6.3.3. The scope of the LVIA had been agreed through consultation as set out in the Applicant's EIA Scoping Report [APP-198] and the Scoping Opinion from PINS [APP-199] and summarised in the ES [APP-037].
- 6.3.4. The Applicant had undertaken a landscape and visual assessment (LVIA), said to be in accordance with relevant guidance (including the Landscape Institute and IEMA *Guidelines for Landscape and Visual Impact Assessment*, 3rd Edition, 2013, 'GLVIA3'), and submitted as a chapter in the ES [APP-037]. It was based on an assessment of the Candidate Design set out in the ES Development Description Chapter [APP-035]. The LVIA referred to published landscape character assessments at a variety of geographical scales (ES 7.3.2) and summarised relevant national and local landscape policies (ES 7.3.1). The construction, operational and decommissioning stages were considered in terms of potential impacts on landscape and views, including the effect of night-time lighting.
- 6.3.5. The Proposed Development would be restricted to part of the site, so the LVIA defined the area in which the infrastructure and activity was proposed as the 'Core Landscape Study Area', as shown on Figure 7.1 [APP-054].
- 6.3.6. Further study areas with radii of 2km and 5km from the site were also used in the LVIA. Clarification provided by the Applicant in response to ExQ1.6.4 [REP2-006] noted that the 2km study area represented *'the area in which the Development exerts most influence on landscape and visual receptors and where significant effects were considered most likely'*. The 5km study area was defined as the distance beyond which, even with good visibility, the Proposed Development would be barely perceptible in the landscape.
- 6.3.7. In our Written Questions (ExQ1) we asked the Applicant why the landscape assessment was restricted to the 2km study area and why some Landscape Character Areas (LCAs) within 2km had been excluded. The Applicant told us [REP2-006] that there would be no likely significant effect on landscape resources beyond 2km due to the limited height of the Proposed Development, the enclosing nature of the existing coastal defences, surrounding vegetation and landform, and the decreasing effects of distance on landscape resources. Fieldwork suggested that there were several LCAs within the 2km study area with extremely limited or no visibility and therefore no further assessment was made, although all areas were visited and assessed.
- 6.3.8. With the benefit of field work and the creation of a series of Zone of Theoretical Visibility (ZTV) maps ([APP-054], Figures 7.2 to 7.3a of the ES), derived from a digital terrain model to establish an understanding of the site and its surrounds and the likely visibility of the Proposed Development, the Applicant identified a series of representative viewpoints to inform the LVIA. These were agreed with key consultees

and formed the basis of the baseline photography and photomontages set out in the ES [APP-063] to [APP-196] and [APP-232].

- 6.3.9. According to the Applicant, the methodology used for the baseline photography and computer rendered photomontages followed the then current best practice guidance, including GLVIA3 and the Landscape Institute's Advice Note 01/11 *Photography and Photomontage in LVIA*, as explained and referenced in an Appendix to the ES [APP-207].
- 6.3.10. We observed that different scales had been used in presenting baseline photographs and visualisations, resulting in cropping and some difficulty making comparisons, so in both sets of written questions we asked the Applicant for clarification of the adopted approach. The Applicant explained ([REP3-016] and [REP4-020]) that the two were to be used for separate purposes - baseline photography captured the baseline context, while photomontages illustrated the effects of the development on the receiving landscape and the detail of the Proposed Development needed to be clear. The Applicant therefore decided that photomontages should be produced at a larger scale to allow a better understanding of the detail of the Proposed Development and clearer identification of the impact.
- 6.3.11. In addition to the LVIA, the Applicant undertook a separate assessment of visual amenity effects on residential properties within 1km of the Core Landscape Study Area. The approach was said to follow (then) emerging guidance on Residential Visual Amenity Assessment (RVAA) produced by the Landscape Institute (Landscape Institute Technical Guidance Note xx/2018 *Residential Visual Amenity Assessment*). The RVAA was set out in an Appendix to the ES [APP-210].
- 6.3.12. In response to a question in ExQ1.6.4 [REP2-006], the Applicant acknowledged that new RVAA guidance issued by the Landscape Institute in March 2019 (TGN 02/2019)¹¹ after the submission of the Application created a clear separation between LVIA and RVAA and that the adopted approach was not fully compliant with the final guidance. However, according to the Applicant, the RVAA was over and above EIA requirements and the assessment of effects remained in line with LVIA methodology.
- 6.3.13. As the LVIA relied on the RVAA in respect of residential receptors, it was unclear why the study area for the RVAA was a radius of 1km from the Proposed Development Site, compared with 2km or 5km for the LVIA. In response to the same ExQ1 question, the Applicant suggested that beyond a distance of 1km there were no residential receptors likely to be affected by the Proposed Development due to their location in the surrounding landscape, local landform and intervening vegetation. According to the Applicant, this was confirmed by the visual assessments from viewpoints 11,14,17,18 and 19.
- 6.3.14. The LVIA considered potential effects on landscape and visual receptors, by evaluating the sensitivity of receptors, predicting a magnitude of

¹¹ Available from: <https://www.landscapeinstitute.org/technical-resource/rvaa/>

change, and combining these factors into a measure of significance of impact. The criteria and approach were set out in detail in section 7.2.6 of the ES [APP-037]. The RVAA followed a different set of criteria, and these were explained in the RVAA report [APP-210].

- 6.3.15. Chapter 4 of the ES [APP-034] reported that, where possible, design changes had been made once the likely significant impacts of the Proposed Development had been determined with the aim of reduction or elimination. Any residual adverse effects had been considered for further mitigation, and these measures were included in an outline Landscape and Biodiversity Management Plan (LBMP) that was appended to the ES [APP-203], and which was intended to be secured through a DCO Requirement.

Baseline Conditions

- 6.3.16. The ES set out a detailed description of the existing landscape and visual context of the Proposed Development Site at ES 7.3.3 [APP-037]. At 7.3.4, it went on to define the value of the landscapes in and around the study areas, and then listed and provided a rationale for the representative viewpoints that were used in the LVIA at 7.3.6.
- 6.3.17. The ES Figures [APP-054] confirmed that the Proposed Development Site did not sit within an AONB, but that it was within a locally designated Area of High Landscape Value (AHLV).

Potential Effects

Landscape

- 6.3.18. Section 7.5 of the ES summarised the assessment of landscape effects, which were tabulated in detail in an appendix to the ES [APP-208]. In summary, the principal temporary significant effects during construction were predicted to be:
- local LCA 5, Graveney Marshes, would experience a major/ moderate effect;
 - the part of the AHLV (Kent Level) within the Core Landscape Study Area would experience a major/ moderate effect, though the effect on the remaining part would not be significant;
 - in terms of the landscape elements of the Core Landscape Study Area itself, major effects were predicted on scenic value, recreational value and perceptual aspects, and major/ moderate effects on landscape quality (condition), rarity, representativeness and associations: these effects were predicted to be localised and confined to the areas in which substantial construction activity was taking place.
- 6.3.19. The corresponding predictions for significant effects during the operational phase were all said to be reversible on decommissioning and can be summarised as:
- a major/ moderate effect on LCA 5, Graveney Marshes;

- a major/ moderate effect on the part of the AHLV (Kent Level) within the Core Landscape Study Area only; and
- the change in character of the Core Landscape Study Area results in a major or major/ moderate effect.

6.3.20. Those for the decommissioning stage were also said to be reversible, and were:

- the Core Landscape Study Area itself would experience a moderate effect on scenic quality, recreational value and perceptual aspects; and
- moderate adverse effects on the AHLV (Kent Level).

Views

6.3.21. Section 7.6 of the ES summarised the assessment of visual effects, which were tabulated in detail in an Appendix to the ES [APP-209]. In summary, the temporary significant effects during construction were predicted to be:

- a major visual amenity effect for users of the Saxon Shore Way, where it runs adjacent to the Core Landscape Study Area;
- a major/ moderate visual amenity effect for users of footpath ZR485;
- a moderate visual amenity effect for users of footpath ZR488;
- a major/ moderate visual amenity effect for users of the NCN 1 cycle route along an 800m stretch of Faversham/ Seasalter Road; and
- in terms of the visual amenity of occupants of properties: major effects at Warm House and the properties at Nagden; major/ moderate effects at Harty Ferry Cottages, All Saints View and Graveney Court Farm, properties along Seasalter Road, Graveney Hill, Crown Cottages, Hill View and at the Sportsman Public House; and, moderate effects on properties along Broom Street and Sandbanks Road, the chalets and cabins in the vicinity of the Sportsman Public House, Cedar Croft, and properties around the Shipwright's Arms at Hollowshore.

6.3.22. The corresponding predictions for significant effects for residential properties during the operational phase were set out in the RVAA [APP-210], and can be summarised as:

- significant effects on visual amenity at 13 residential properties or groups, reducing to ten after year 10 of mitigation planting growth; and
- of these, one, Warm House, continued to experience a long-term, major effect due to a change from an open, long-distance view across fields to a very short-range view of mitigation planting.

6.3.23. The ES [APP-037] predicted additional significant effects during the operational period, which were all said to be temporary, and reversible on decommissioning:

- short-term, moderate effects on the visual amenity of users of NCN 1 in summer until year 5, and in winter until year 10;

- major effects on the visual amenity of users of the 5km stretch of the Saxon Shore Way adjacent to solar panel arrays, becoming major/moderate within 10 years of mitigation planting;
- major/moderate effects on the visual amenity of users of footpath ZR485; and
- moderate effects on the visual amenity of users of footpath ZR488 along the 600m stretch on elevated ground at Graveney Hill.

6.3.24. The ES [APP-037] analysed each of the viewpoints [APP-063] to [APP-108] to assess the effects of the Proposed Development in winter and summer (section 7.6.2.3). The locations of the viewpoints were shown on Figure 7.10 of the ES [APP-054]. Significant adverse but reversible impacts on views were predicted from the following viewpoints:

- VP1, Saxon Shore Way at Nagden Cottages;
- VP2, Saxon Shore Way at north-western corner of the Proposed Development Site;
- VP3, junction of Saxon Shore Way and footpath ZR485;
- VP4, Saxon Shore Way north-east of the Proposed Development Site;
- VP5, footpath CW90 near Seasalter Road and NCN 1, until year 10 only;
- VP6, footpath ZR488 on Graveney Hill;
- VP7, footpath ZR488 on the southern boundary of the Proposed Development Site, but only until year 5 in summer and year 10 in winter;
- VP8, footpath ZR490 near All Saints Church, Graveney, but only until year 5 in summer and year 10 in winter;
- VP12, Saxon Shore Way at the Shipwright's Arms; and
- VP22, on footpath ZR485 as it crosses the Proposed Development Site.

6.3.25. An Appendix to the ES [APP-246] analysed the potential for glint or glare effects from the solar panel arrays on the following receptors:

- residents of dwellings within 1km of the solar arrays;
- road users on Seasalter Road to the east of the development area; and
- users of footpaths around and through the development area (Saxon Shore Way and ZR485).

6.3.26. No significant impacts were identified using the assessment methodology adopted. In response to ExQ1, the Applicant provided further information about the approach used [REP2-025].

6.3.27. The ES [APP-037] characterised potential effects at the decommissioning stage as likely to be of a similar nature and significance as those listed for the construction phase.

6.3.28. The ES [APP-037] predicted no adverse effects in respect of lighting at night-time during any of the three phases.

Mitigation Measures

- 6.3.29. At 7.7, the ES [APP-037] stated that 'embedded mitigation' had been incorporated into the scheme design, including the landscape planting proposed in the outline LBMP [APP-203]. We note that these measures would be secured through the final version of that Management Plan and the discharge of a DCO Requirement by the local authority.
- 6.3.30. No further landscape or visual mitigation measures were proposed by the Applicant, as these *'would be more detrimental to the overall landscape and visual characteristics.'*

Applicant's Summary of Predicted Effects

- 6.3.31. Tabular summaries of the predicted residual effects from the Proposed Development individually and cumulatively with other known developments were provided for landscape receptors in Tables B3 and B5 of Appendix A7.2 to the ES [APP-208], and for visual receptors in Tables C3 and C5 of Appendix A7.3 [APP-209].
- 6.3.32. The ES [APP-037] concluded that there would be significant adverse effects on landscape and visual receptors, but despite the large scale and extent of the Proposed Development, the effects would be limited to *'a small geographical area and a small number of visual receptors,'* (paragraph 480) and that *'the effects of the Development are highly localised, especially given the scale of the Development and have a limited geographical extent in which the Development will be seen or will affect the landscape'* (paragraph 483). It also suggests that the proposed landscape planting would help to integrate the Proposed Development Site into the wider landscape.

6.4. PLANNING ISSUES

Relevant Representations

- 6.4.1. Impact on landscape or views was mentioned in a large number of Relevant Representations (RRs), with a few specifically mentioning light pollution and glint and glare.
- 6.4.2. In its RR [RR-826], Natural England agreed with the Applicant that impacts on the Kent Downs AONB would not be significant. This was confirmed in a later submission [REP2-096]:

'... 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.'

- 6.4.3. Natural England also noted in its RR that there would be significant visual impact on users of the England Coast Path. We note, however, that

Natural England's June 2017 proposal for the England Coast Path to follow the route of the Saxon Shore Way in the vicinity of the Proposed Development Site had not been confirmed by the Secretary of State for Environment, Food and Rural Affairs before the close of the Examination. Whilst recognising the attempt to mitigate this through planting, Natural England advocates the use of reedbed rather than scrub in certain areas.

- 6.4.4. Many IPs drew attention to the large scale of the Proposed Development in the context of a flat, open landscape; a character change from an undeveloped or 'natural', tranquil landscape to one of an industrialised nature; and the impact on the recreational and visual amenity of footpaths, especially the Saxon Shore Way (for example, CPRE Kent [RR-751]).

Local Impact Reports

Swale Borough Council

- 6.4.5. In its Local Impact Report (LIR) [REP1-005], Swale Borough Council described the landscape of the Proposed Development Site and its context and noted that it formed part of National Character Area 81, Greater Thames Estuary, and lay in the North Kent Marshes AHLV identified in the Local Plan.
- 6.4.6. It went on to explain that the site was predominantly within the Graveney Marshes character area of the 'Marshland Landscape Type' in the Swale Landscape Character and Biodiversity Appraisal SPD classification. The key characteristics were:
- large open area of alluvial marshland;
 - large-scale arable fields divided by long straight drainage ditches;
 - typical features ditches, sea wall, estuarine saltmarsh, sand and mudflats; and
 - atmospheric and tranquil landscape with large open and often dramatic skies.
- 6.4.7. A small part was within the neighbouring Graveney Arable Farmlands character area, which, along with the Graveney Fruit Farms character area to the south of the site, were part of the more enclosed and intimate landscape of the Fruit Belt Landscape Types.
- 6.4.8. The LIR drew attention to policy DM 24 of Bearing Fruits 2031: The Swale Borough Local Plan (Full Council item, 26th July 2017) (The Swale Borough Local Plan), Conserving and Enhancing Valued Landscape. This referred to locally defined AHLVs and noted a requirement for '*the conservation and enhancement of the landscape*' and '*avoidance, minimisation and mitigation of adverse landscape impacts*' unless '*social and or economic benefits outweigh the harm*'.
- 6.4.9. The LIR explained that a review of Swale local landscape designations was undertaken in 2018, with the review's recommendations being agreed at a Swale Local Plan Panel in November 2018. This included confirmation of the North Kent Marshes - South Swale Local Landscape

Designation, within which the vast majority of the Proposed Development Site sits. At paragraphs 6.1.9 and 6.1.10, the LIR suggested that the Proposed Development would have a very significant effect on its landscape character, conflicting with the aims of policy DM 24. A later submission from Kent County Council [REP3-054] clarified that the boundary was amended at the time to exclude an area of higher ground around Cleve Hill and Graveney Hill from the designation.

- 6.4.10. In a later response [REP2-034], the Applicant noted that the review document was not available at the time of writing the ES. It considered that the LVIA as undertaken complied with the requirements of the document and noted that the greater level of detail of assessment in the ES predicted a significant effect for the area of the site within the AHLV, but that the effects on the areas of the AHLV that lie outside the site were not significant.
- 6.4.11. In relation to residential visual amenity, the LIR acknowledged that there were few residential properties close to, or with views across, the Proposed Development Site. However, it noted that for those that did, the defining characteristics were a sense of remoteness and long views across the open landscape of the Proposed Development Site. It suggested that changes would be most significant at Warm House, which had views across the Proposed Development Site to Hollowshore (2km to the west), Shellness (5km north-east) and caravan parks at Leysdown-on-Sea at approximately 7km away. It noted that these views were of a flat and empty landscape, with even small objects at ground level being visible. The significant visual intrusion of the power lines across the Proposed Development Site was also noted.
- 6.4.12. It suggested that the proposed mitigation planting would interrupt the long-distance views currently available from key receptors, as well as screening the Proposed Development. It suggested that no attempt had been made to retain any views through the site.
- 6.4.13. In response, the Applicant noted [REP2-033] that the landscaping scheme set out in the outline Landscape and Biodiversity Management Plan (LBMP) [APP-203] was developed in consultation with local residents, and that the design of the Proposed Development was adjusted to provide greater undeveloped buffers to properties at Nagden and Warm House.
- 6.4.14. In addressing visual amenity from the Public Right of Way (PROW) network, the LIR confirmed that the Proposed Development Site was *'surrounded and crossed by various public footpaths from which extensive uninterrupted views can be had'* and suggests that the solar panels will *'radically alter the experience of using long stretches of these paths'*.
- 6.4.15. It highlighted that Footpath ZR484 (the Saxon Shore Way) provided access to the undeveloped coast, facilitating wide views of The Swale and Thames Estuary. Whilst acknowledging that views out to sea would not be significantly affected by the Proposed Development, it suggested that

the sense of solitude would be. It noted that the coastal defences provide *'uninterrupted views inland of an almost featureless agricultural land dissected by ditches'*, with the horizon formed by wooded hills in the distance. It was said that this would be replaced with 'overwhelming' and 'relentless' rows of solar panels, though they would not obstruct the existing, distant horizon.

- 6.4.16. The LIR also noted that the solar panels would entirely obstruct existing views from footpath ZR485, which crosses the site, and postulated that this would become a largely redundant walk through an industrialised landscape. It suggested that the same could be said of the permissive footpath proposed as a mitigation measure in the dDCO.
- 6.4.17. In relation to public footpath ZR488 at the eastern end of the Proposed Development Site, the LIR predicted that the proposed screening would, in time, largely hide the arrays of solar panels, except from higher parts of Cleve Hill. From here, it was suggested that there would be views of solar panels stretching away into the distance.
- 6.4.18. Swale Borough Council did not consider that glint and glare issues would result in a significant adverse impact.

Canterbury City Council

- 6.4.19. Canterbury City Council drew attention in its LIR [REP1-002] to paragraph 007 of the PPG for renewable and low carbon energy. This stated that the need for renewable energy did not automatically override environmental protections and that local topography was an important factor in assessing whether large-scale solar farms could have a damaging effect on the landscape. It also recognised that the impact can be as great in predominantly flat landscapes as in hilly or mountainous areas.
- 6.4.20. Canterbury City Council's LIR stated that the impact of the Proposed Development on the landscape character and visual amenity of the district was a key local issue, but it largely reserved the Council's opinions pending the completion of a review of the LVIA by consultants on behalf of the three local authorities.
- 6.4.21. The LIR acknowledged that there was no built development proposed in the Council's jurisdiction, though the solar panel arrays would be visible. It suggested that there would be harm to the setting of the landscape within Canterbury District as the proposed solar panels would *'result in the presence of uncharacteristic and utilitarian features of an industrial scale in the open countryside'*, disturbing the continuity of the existing landscape character of the area.
- 6.4.22. The LIR also noted the sensitivity of the landscape to mitigation screen planting, as the Proposed Development Site within the District formed part of the Seasalter Marshes LCA, characterised by open expanses of grazing marsh.

Kent County Council

- 6.4.23. Kent County Council's LIR [REP1-004] described the PRow network around the site and introduced the possibility that the England Coast Path National Trail might be aligned along this route by 2020.
- 6.4.24. In relation to the visual amenity of PRow users, the LIR suggested that the Proposed Development would transform the character of the landscape from arable to industrial. The LIR acknowledged the provision of visualisations from key points on the PRows but considered the cumulative (sequential) visual amenity impacts of walking the entire lengths of the paths in the area to be insufficiently considered.

Other Representations to the Examination

Local authorities

- 6.4.25. In response to ExQ1.6.17, Swale Borough Council had no comments on the scope or approach to the LVIA. However, it believed that the mitigation planting could be more in keeping with local landscape character and biodiversity. The Council accepted the RVAA methodology but found the Applicant's conclusions in respect of the mitigated impact on properties to be underplayed, though it did not believe that they would be rendered '*unpleasant places in which to live*'.
- 6.4.26. In a signed SoCG [REP4-037], Swale Borough Council confirmed its concurrence with the approach to the LVIA:
- 'It is agreed that the methodology used in the preparation of the LVIA assessment is appropriate. It is further agreed that the characteristics assessed and landscape designations taken into account as the baseline for the preparation of the Chapter are appropriate and consistent with the issues raised in respect of Landscape in the Swale LIR.'*
- 6.4.27. However, whilst deferring to the subsequent local authorities' review report in terms of outstanding differences, the SoCG highlighted that the Council did '*not agree with the assessment of impact provided in Chapter 7 and consider the impacts to be greater given the scale of the development.*' There also remained a difference in terms of the RVAA and the effectiveness of mitigation planting in preserving amenity.
- 6.4.28. Canterbury City Council's response [REP2-048] suggested that the conclusions and findings of the ES were questionable as there would be harm to the local landscape and its setting. Kent County Council [REP2-053] questioned whether some of the assessments where significant effects become not significant as a result of mitigation could be relied upon.
- 6.4.29. Further representations were made following Kent County Council's submission of the local authorities' independent review of the LVIA [REP3-054]. The review included some criticisms of the Applicant's presentation and interpretation of the LVIA, such as:

- the extensive use of qualifiers;

- an over-emphasis on existing infrastructure such as pylons, which is inappropriate since they are an entirely different scale and form;
- an over-statement of landscape benefits such as a small area of new grazing marsh;
- an over-reliance on mitigation to limit effects and integrate the Proposed Development into the landscape, neglecting to account for its scale in relation to the amount and type of mitigation proposed;
- concluding that views would remain 'open' from the Saxon Shore Way when, in fact, recreational receptors would experience views of the solar development for some 5km along the route; and
- an 'inappropriate' conclusion that landscape and visual effects are 'highly localised' as this does not consider the overall scale of the Proposed Development such that impacts occur over the entirety of the development area and '*virtually an entire character area*'.

- 6.4.30. The review also criticised some of the Applicant's judgements in relation to the predicted scale of change and significance of effects.
- 6.4.31. In its covering email to the submission [REP3-054], Kent County Council described updates to the Natural Environment section of Planning Practice Guidance released on 21st July 2019 and suggested that these were relevant to the Examination insofar as they introduced a change of emphasis with regard to local landscape designations. It also summarised the discussion at ISH1 around the amendment of the local landscape designation boundary to remove the area around Cleve and Graveney Hills to reflect landform and current land use, including the building of the existing Cleve Hill substation: however, it suggested that the vast majority of the Proposed Development Site had been confirmed worthy of local landscape designation.
- 6.4.32. In response [REP4-020], the Applicant recognised a greater policy emphasis on ordinary landscapes but noted that this was in any case the basis of the LVIA as set out in Chapter 7 of the ES [APP-037].
- 6.4.33. Following up its reserved position in the LIR [REP1-002], Canterbury City Council submitted further representations [REP3-049] following the submission of the local authorities' independent review of the LVIA [REP3-054]. It raised no objection to the LVIA methodology or chosen viewpoints and clarified that the solar panel arrays would not be directly adjacent to the Council's administrative boundaries, as previously suggested.
- 6.4.34. The Council did, however, criticise some of the value categories allocated to landscape receptors, and suggested that there was a lack of consistency in reporting the sensitivity of and extent of effects on the LCA and AHLV. It also suggested that the comparison made in the ES between the Proposed Development and existing pylons in the landscape was inappropriate, given the differing nature of these developments in terms of horizontal and vertical extents. While considering the extent of proposed mitigation to be limited in relation to the scale of the Proposed Development, the Council also questioned its appropriateness, given the characteristic openness and long-ranging views.

- 6.4.35. The Applicant provided a response to the local authorities' review report in its commentary on submissions at Deadline 3 [REP4-041] and in its answers to ExQ2 [REP4-020]. Clarification and reference back to relevant sections of the ES were set out where the Applicant deemed it necessary, and it generally stood by the conclusions in the LVIA Chapter [APP-037].
- 6.4.36. In response to our request for comments on three specific criticisms of the LVIA arising from the review report, the Applicant noted [REP4-020]:
- *Impacts are underestimated because the LVIA has a focus on the extent of the development rather than the landscape's character and susceptibility:* the GLVIA3 recommended approach was used, and judgements were made about magnitude and proportion of loss and alteration of character as well as geographical extent, so 'the impacts are correctly assessed and not underestimated';
 - *Simply because only a small proportion of large areas is affected is not a reason to state that effects are not significant:* the Applicant has not drawn this conclusion - the effects are not simply considered on the extent of the national area covered but also the effect on its character and distinctiveness;
 - *The sensitivity for the Core Landscape Study Area is said to be high, but low for the majority of the AHLV - it should be the same for the entire AHLV:* the sensitivity for the Core Landscape Study Area was assessed as high due to the open nature of the landscape and a limited ability to accommodate development without changing the landscape character, while the sensitivity of the AHLV is assessed as low as features such as the sea walls compartmentalise the landscape.

Natural England

- 6.4.37. In a signed SoCG submitted at Deadline 7 [AS-050], Natural England followed up on its comments in its RR [RR-826] about mitigation planting. It agreed that the low-density scrub planting proposed in the outline LBMP was appropriate to the site and welcomed the proposal to provide reedbed between the solar array and the Arable Reversion Habitat Management Area set out in the outline LBMP submitted at Deadline 6 [REP6-005].
- 6.4.38. The SoCG also confirmed NE's concurrence with the ES findings of no significant effect on the Kent Downs AONB.

Visibility and cross-sectional drawings

- 6.4.39. We found some of the Applicant's photomontages from mid- to longer-distances difficult to interpret, largely because of the scale and horizontal nature of both the receiving landscape and the Proposed Development, and the very fine line that was evident between no visibility and some visibility of the solar arrays from some key viewpoints. Some IPs were having similar difficulties, and to provide more clarity we asked the Applicant to produce scaled cross-sections from viewpoints to the north, west and south-west, across Faversham and Oare Creeks and The Swale, and from a boat on The Swale. One request was omitted at Deadline 3,

and we questioned one of those provided [REP3-027], so new versions were produced to show more complete sections through the Proposed Development Site at Deadline 4 [REP4-029].

- 6.4.40. At ISH3, we had heard from Mr Pollock, the Vice Chairman of the Faversham and Oare Heritage Harbour Group, following his representation about impacts on seascape and views from boats on The Swale [REP2-074]. His submission was illustrated with two sequences of photographs that could be combined to form baseline panoramas from the Wreck Buoy Anchorage and Sand End Buoy. He also submitted a hand-annotated version of the former that was said to superimpose the Proposed Development on the baseline photographs. Mr Pollock confirmed that his photographs had been taken from a boat floating at high water, and that his approach was 'rudimentary' rather than following any published methodology.
- 6.4.41. The Applicant's response to the representation [REP3-020] was that the photographs did not accurately depict the visibility of the Proposed Development and referred to the ES Figures [APP-054] and to the cross-sectional drawings.
- 6.4.42. The cross-sections were discussed in some detail at ISH6, and it was concluded that there would be:
- no visibility of the solar arrays from the Saxon Shore Way on the west bank of the Faversham Creek at Oare;
 - a view of approximately the top 1m of the ends of the arrays from the Saxon Shore Way on the southern side of Faversham Creek at the 'Take a Pew' seat (Ham Marshes, south-west of the site); and
 - a distant view (from approximately 1.8km) of the top 1.25m of the ends of the arrays from Harty Church.
- 6.4.43. A further section from a viewer at 3m elevation on a craft on the water was requested by the Faversham and Oare Heritage Harbour Group at ISH6, and this was provided by the Applicant at Deadline 5 [REP5-025]. Neither the original or revised cross-section from a craft on The Swale indicated any visibility of the solar arrays, and we are content that the Applicant's interpretation of Mr Pollock's montages from the Wreck Buoy Anchorage is correct. Nevertheless, the ZTV plans [APP-054] do indicate some visibility of the Proposed Development from some more distant parts of the coastal waters.

6.5. ExA RESPONSE

The Existing Landscape and Visual Context

- 6.5.1. We have given very careful consideration to the landscape and visual implications of the Proposed Development.
- 6.5.2. Our USIs [EV-002] to [EV-003E] and ASI [EV-010] provided a thorough understanding of the character, condition and quality of the landscape of the Proposed Development Site and its surroundings. We are satisfied that we have clearly seen key, representative long- and short-distance

views into and out of the site. In general, the findings of our inspections accord with the descriptions and condition summaries set out by the Applicant in the ES [APP-037], and we provide just a short summary of our key observations here.

- 6.5.3. The site was reclaimed from coastal saltmarshes and now predominantly comprises a flat and featureless coastal plain of arable fields, interrupted by drainage ditches, borrow pit reed beds and the 5m tall coastal flood defence bund and wall that protects the site; this carries a section of a long-distance coastal footpath from Gravesend to Hastings, the Saxon Shore Way. To the east of the arable area that would host the solar panel arrays is grazing marsh that forms part of The Swale SSSI and SPA; this is included within the Proposed Development Site for mitigation and enhancement purpose, but it would remain undeveloped.
- 6.5.4. The 400kV Kemsley to Canterbury overhead electricity line runs across the site, parallel to the coast. The supporting lattice metal pylons are incongruous vertical features in a predominantly horizontal landscape. They provide an indication of scale but detract from the general impression of undeveloped wilderness.
- 6.5.5. The location proposed for the substation and battery storage compound and its associated flood protection bund sits at the foot of the northern slope of Cleve Hill in the south-eastern part of the site. Cleve Hill and Graveney Hill rise to a little more than 15m AOD along the access track to Cleve Hill Farm and Crown Cottages. The modern agricultural buildings of Cleve Hill Farm and structures in the existing Cleve Hill substation provide some of the few visible signs of built development when looking across the site from the Saxon Shore Way, though from most viewpoints they are seen against the softening, vegetated backdrop of Cleve Hill.
- 6.5.6. Expansive views are available from the PRoW network in the northern, western and eastern parts of the site. The Saxon Shore Way offers elevated and extensive views across the dynamic seascapes formed by the saltmarsh, intertidal and marine habitats of The Swale and its associated creeks, backed in views to the north-west by the Isle of Sheppey, approximately 1.5km away. There are return public views from Harty and the Swale National Nature Reserve on the southern shore of the Isle of Sheppey, in which the Proposed Development Site forms just part of the wide-reaching, low-lying marshland coastline between Sittingbourne and Whitstable, backed by well-vegetated hills.
- 6.5.7. On a clear day, the views from the Saxon Shore Way extend westwards along The Swale to the industrialised area of Kemsley and the A249 road bridge, some 12km away. To the north-east, there are even more extensive views of the seascape towards Whitstable and the Thames Estuary, with its distant offshore wind turbines.
- 6.5.8. The Saxon Shore Way also offers far-reaching views southwards across the open landscape of the Proposed Development Site towards the backdrop of a wooded ridge and, beyond that, the elevated North Downs. Both areas of high ground provide long-distance views back across the

site to The Swale and the Isle of Sheppey from a network of PRoW and publicly accessible land.

- 6.5.9. The reclaimed marshland landscape continues along the coast, with the arable fields, grassland and wetlands of Oare, Ham and Luddenham Marshes to the west, separated from the site by Oare and Faversham Creeks, while the wetlands and grazing marshes of Graveney Marshes and Seasalter Level extend eastwards towards Whitstable.
- 6.5.10. To the south of the site is arable farmland with orchards and fruit growing, including many areas of polytunnel on the slopes of the elevated land between Nagden and Graveney. The ground here rises to some 20m near Sandbanks Farm, and the landscape is rather different from the site, with smaller fields bounded by hedgerows and belts of trees, most notably poplars, creating an enclosed character. In contrast to the open views from the northern parts of the Proposed Development Site, the PRoWs through this landscape immediately south of the site provide few longer-distance views, and despite the proximity, very limited visibility of the site itself.
- 6.5.11. Figure 7.8 of the ES [APP-054] shows that, at its nearest point, the boundary of the Kent Downs AONB lies some 4km away to the south of the site. As Natural England's RR [RR-826] explains, however, and as can be seen from Figure 7.10 of the ES [APP-054], the higher ground of the AONB with public views towards the site lies further to the south, at a distance of approximately 7.5km.
- 6.5.12. The ES [APP-037] and [APP-054] shows that the vast majority of the Proposed Development Site falls within an AHLV (Kent Level), covered by policy DM 24 of The Swale Borough Local Plan. Swale Borough Council amended and confirmed this as the North Kent Marshes - South Swale Local Landscape Designation in 2018 [REP1-005] and [REP3-054], after the completion of the ES.

Approach and Methodology

- 6.5.13. There was little contention over the general approach taken to the LVIA in Examination, but we understand IP concerns over some of the detail. An adequate range of baseline photography and visualisations was provided. The cross-section drawings assisted us in the assessment of visibility from key locations where the visualisations were difficult to interpret. The choice of study areas, reliance of the LVIA on the 1km radius RVAA study, and indeed the latter's general appropriateness, raised some initial concerns, but we are satisfied with the Applicant's response. Overall, we do not believe that any of the detailed concerns about the LVIA, including those set out in the local authorities' review report, make a material difference to the outcome or conclusions.

Design

- 6.5.14. The east-west orientation of the solar arrays and their height above ground level raised some novel issues in terms of the LVIA. While unusual, we are content that the Applicant's landscape experts had been

properly briefed by viewing similar, albeit smaller-scale developments elsewhere in Europe, and that all design aspects were properly taken into account in the LVIA.

- 6.5.15. NPS EN-1 requires that developments should be designed carefully to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate. We note that the design responded appropriately to concerns raised during pre-application consultation, including a reduction in the extent of the solar arrays to bring the boundaries back to the lower-lying ground and to provide greater buffers to some sensitive receptors.
- 6.5.16. The enclosure of the substation and battery storage facilities within a new flood protection bund placed at the foot of Cleve Hill and in front of the existing Cleve Hill substation is an appropriate design measure.

Mitigation

- 6.5.17. We agree with the Applicant's landscape planting approach to mitigation, which focuses on strengthening planting along the southern boundaries and integrating this into the southern parts of the Proposed Development, whilst providing minimal and appropriate planting elsewhere to maintain the open, expansive landscape character while providing some filtering of views.
- 6.5.18. We note that while the proposed mitigation provides more than 3km of hedgerow together with reedbeds, shelterbelts, woodland and scrub, new structural planting is focussed on the southern parts of the site adjacent to the existing enclosed landscape, respecting the broader context of an expansive, open landscape over the rest of the Proposed Development Site. Here, the very simple landscape treatment provides a considered response to the character and views of both the site and surrounding coastal landscape, though it will do little to mitigate close views of the solar arrays from the adjacent sections of the PRow network.
- 6.5.19. The mitigation planting for the proposed flood protection bund would go some way towards its visual integration into the backdrop when viewed from points along the Saxon Shore Way, though it would be ineffective in screening the taller elements of the proposed substation.
- 6.5.20. While structural planting would grow to screen the Proposed Development from some of the adjacent properties, this would be at the expense of loss of expansive, open views. This is a significant effect in itself, but in discussions at ISH4 (as recorded in [REP3-016]), we recognise that such planting schemes have been discussed and agreed with the respective residents.

Scale and Context in Relation to Landscape Character

- 6.5.21. NPS EN-1 accepts that virtually all nationally significant energy infrastructure projects will have effects on landscape, and the Proposed

Development is no exception. In accordance with this policy, we have considered the existing character, quality and value of the landscape and its capacity to accommodate change. We note from NPS EN-1 that coastal areas are particularly vulnerable to intrusion because of the potential high visibility of development on the foreshore, on the skyline and affecting views along stretches of undeveloped coast.

- 6.5.22. The introduction of such a large expanse of solar panels up to 3.9m in height will undoubtedly completely change the character and quality of the locally cherished landscape of the Proposed Development Site. However, while extensive, the solar arrays are confined to the lowest ground, providing a historical reference to former saltmarsh and intertidal areas, much of which would once have been inundated by the sea at high tide. As such, they would sit more comfortably in the landscape than would have been the case had the arrays extended up the slopes of the neighbouring hills.
- 6.5.23. The character and value of seascapes experienced from the Saxon Shore Way would not be directly affected to a significant extent by the Proposed Development, though its presence would affect the user's experience and the general sense of remoteness, wildness and solitude.
- 6.5.24. Due to their extended height, the solar panels will be of a different vertical scale from the site's native features. However, this vertical prominence will be reduced by the vast horizontal scale of the solar arrays and must be seen in the context of the existing detracting of the power line pylons that cross the site.
- 6.5.25. We have concluded that the relatively low-lying nature of the solar arrays and the high level of visual containment largely restricts the area of significant character and landscape value change to the Proposed Development Site itself, though this is not to underestimate the extent of the area affected by the Proposed Development nor the sensitivity and value of its landscape as part of an AHLV. This change represents a significant adverse effect on the landscape character and value of the site and LCA 5, Graveney Marshes.
- 6.5.26. The proposed substation, battery storage facility and flood protection flood defences sit at the base of Cleve Hill and they would have the general appearance of a grassy extension of the higher ground. Some parts of the substation would protrude above the vegetated bund, but these would be backdropped by the existing Cleve Hill substation and farm buildings when seen from the great majority of public viewpoints.

AONB and AHLV

- 6.5.27. We agree with the Applicant and Natural England that there would be no likely significant effect on the landscape of the Kent Downs AONB, such that the proposals would not conflict with the intentions of the National Parks and Access to the Countryside Act 1949 in relation to its provisions for AONBs.

- 6.5.28. We have concluded that, during all phases, the Proposed Development would cause significant adverse effects on the character and value of that part of the AHLV within the proposed Order limits, which represents a substantial part of the designated area that stretches along both banks of The Swale across the Borough. While the new substation, battery storage compound and flood protection bund would extend the area of development into the recently amended AHLV and therefore add to this effect, the area involved is relatively small and in a location that minimises the impact.
- 6.5.29. We have taken into account all aspects and likely changes to the landscape in reaching these conclusions, including quality and condition, scenic value, recreational amenity and public perception.

Views and Residential Amenity

- 6.5.30. We note from NPS EN-1 that coastal areas are particularly vulnerable to visual intrusion from energy developments because of the potential high visibility on the foreshore, on the skyline and the effect on views along stretches of undeveloped coast. In this case, we believe that the relatively low-lying nature of the solar arrays and the high level of visual containment offered by topography, vegetation and the existing coastal flood defences largely restrict this intrusion to the Proposed Development Site itself, though this is not to underestimate the extent of the area affected by the Proposed Development nor the sensitivity and value of the views that would be readily available from the Saxon Shore Way, other PRow adjacent to the site and a small number of residential properties.
- 6.5.31. As views of the seascape from the Saxon Shore Way around the site would be diametrically opposite those of the Proposed Development, walkers that stop to look across the creeks, The Swale or out towards the Thames Estuary would not be immediately aware of the solar arrays. However, whilst walking most of the Saxon Shore Way in the vicinity of the site in either direction, the elevation of the footpath on the coastal defences would mean that users' general views would be of both the Proposed Development and the wider seascape.
- 6.5.32. Views inland would be over the top of the solar arrays towards the backdrop of Cleve Hill and the well-wooded landscape of Sandbanks and Broom Street, then further in the distance, the wooded skyline ridges of Church and Blean Woods and the North Downs. Except for users of footpath ZR485 across the site and the proposed new permissive path, there would be no visual impact on horizons or the skyline, and the Proposed Development would not directly and significantly intrude on the extent of views of the coast or seascapes from any key receptor.
- 6.5.33. In relation to views from the sea, we consider that views of the Proposed Development would be barely perceptible from the types of recreational craft that we have seen in the area. Nearer the shore, the existing coastal defences would completely block visibility of the solar arrays, though some of the higher elements of the proposed substation would be

seen protruding above the flood protection bund, but only as a very small proportion of an expansive, wide view, and against the backdrop of the existing Cleve Hill substation. At a greater distance out to sea, the solar arrays would be seen above the sea wall as a thin strip of a different colour and texture; however, at this distance, it would be difficult to distinguish this from the other horizontal elements of the view.

6.5.34. We expect similar changes to views from viewpoints along the southern shore of the Isle of Sheppey and Isle of Harty. We deal with this in the heritage section of this Report in relation to The Church of St Thomas the Apostle at Harty, but from the LVIA visualisations and cross-sections, we expect very minor visibility of a similar strip that will be difficult to distinguish at this range. It will be restricted to a section of the wider coastal marshland shoreline, where it will always be seen in association with the existing sea wall.

6.5.35. The Proposed Development would lead to changes in some public views from much of the coloured area shown on the Applicant's ZTV plans [APP-054], though we have concluded that significant adverse changes to views for all phases would be restricted to:

- users of the Saxon Shore Way between Nagden and The Sportsman in Seasalter;
- users of footpath ZR485 across the site;
- users of footpath ZR488 from the southern boundary of the Proposed Development Site to the top of Graveney Hill; and
- users of the NCN 1 cycle route along an 800m stretch of Faversham/Seasalter Road.

6.5.36. At 5.9.18, NPS EN-1 also requires us to consider impacts on the visual amenity of local residents. We have concluded that the Proposed Development will have significant adverse effects on some views from Warm House, properties at Nagden, Harty Ferry Cottages, All Saints View, Graveney Court Farm, properties at Graveney Hill and along Seasalter Road to Cleve Hill, Crown Cottages, Hill View, properties along Broom Street and Sandbanks Road, the chalets and cabins in the vicinity of the Sportsman, Cedar Croft, and some properties at Hollowshore. The public using facilities in the same areas, such as the Sportsman and the Shipwright's Arms at Hollowshore will experience a similar change in visual amenity.

AONB and AHLV

6.5.37. We concur with Natural England that there would be no significant effect on views from the Kent Downs AONB. As such, the Proposed Development respects the provisions of the National Parks and Access to the Countryside Act 1949 in relation to AONBs. Views from within the AHLV in the immediate vicinity of the site would be significantly affected, though away from the immediate vicinity of the Order limits, the changes to views of and from the AHLV would tend to less than significant due to the relatively high level of visual containment of the site.

Lighting

- 6.5.38. We are satisfied with the Applicant's explanation of how the night-time lighting associated with the Proposed Development would work [APP-035] and that for most of the time the lighting would only be activated if there was an intrusion into the area and PIR sensors were activated. Lighting within the substation and battery storage facility would be contained by the proposed flood protection bund. We were told that lighting would be designed to point down so as to limit light pollution, and that walkers on the footpaths through and around the site would not trigger the lighting. The Applicant has fully considered lighting as part of the LVIA, and no significant effects are predicted [APP-037]. The detailed design of lighting would be secured through Requirement 2(g) of the Recommended DCO.

Glint and glare

- 6.5.39. There is no standard or industry-accepted methodology for a glint and glare assessment, but we are generally content with the approach taken. The Applicant's study [APP-246] concludes that some walkers on the local PRoW network will experience transient glinting, though often in the context of reflections from water. It further concludes that a few residential properties to the south of the site will experience some glint from the solar panel surfaces at specific times of the day and year, but these will not be frequent or intense enough to be significant. We have no reason to disagree with the conclusions of the Applicant's report.

The Scale of the Proposed Development in Relation to Impacts

- 6.5.40. We have considered the suggestion in NPS EN-1 that reducing the scale of a project can help to mitigate the visual and landscape effects, but that this may result in a significant operational constraint and reduction in generation output.
- 6.5.41. Despite the expansive landscape, this relatively low, horizontal development is largely visually contained within the Order limits because of the enclosing influence of the existing coastal flood defences and the topography and vegetated character of the higher ground to the south. A reduction in scale would proportionately reduce the magnitude of the change experienced from a small number of residential receptors, the Saxon Shore Way and a few more distant viewpoints but would do disproportionately little to ameliorate the change in character of the Proposed Development Site, the LCA or the AHLV, or the significance of any of the landscape or visual impacts. As such, we do not believe any reduction in scale would be merited in light of the undoubted economies of scale that are currently required to ensure the viability of an unsubsidised solar farm of this nature.

Permanence

- 6.5.42. In reaching a judgement, NPS EN-1 at 5.9.16 tells us that we should consider whether any adverse impact on the landscape is temporary and

capable of being reversed in a reasonable timescale. In this case, we have taken the view that all of the adverse landscape and visual impacts are fully reversible and would be removed on full decommissioning in accordance with the agreed outline Decommissioning and Restoration Plan [APP-206], which is secured through Requirement 17. The timescale for this would be a maximum of 40 years if the Medway Estuary and Swale Strategy (MEASS) managed retreat proposals are brought forward in the expected timescale but are not fixed otherwise.

- 6.5.43. As a result of other site constraints, such as the existing electricity pylon line, there remains potential for part of the Proposed Development to be retained beyond this period should a part of the Proposed Development Site not be included in the future managed retreat proposals. We have taken this into account in our considerations.

6.6. CONCLUSIONS

- 6.6.1. Taking all relevant representations and policies into account, we conclude:

- there would be no significant effects on any AONBs;
- there would be major and significant adverse landscape effects on a local plan Area of High Landscape Value with the extent largely confined to the immediate area of the Proposed Development;
- landscape character, scenic value, recreational value, perceptual aspects, landscape quality and condition, rarity, representativeness and associations would all be adversely affected in the area local to the Proposed Development;
- two residential properties would experience major and significant long-term impacts on some views, as would users of two PRoWs locally, including the Saxon Shore Way, a long-distance footpath;
- while the Proposed Development Site is extensive, changes to views away from the immediate area would be reduced by the visual containment of the solar arrays within the site and, from elevated viewpoints further way, the effect of distance, topography and the visual context;
- iconic views from the Saxon Shore Way across The Swale towards the Isle of Sheppey and the Thames Estuary would not be directly affected, but walkers would nevertheless be aware of the Proposed Development behind them and the atmosphere and sense of isolation would be affected;
- the design of the Proposed Development has evolved to reduce landscape and visual impacts through bringing its boundaries back to the lower-lying ground and increasing buffers to some sensitive receptors;
- some limited and appropriate mitigation planting is proposed, but a more extensive scheme would in itself cause adverse landscape and visual impacts in the open, expansive landscape;
- the electrical compounds and associated flood protection bund would be in an appropriate location at the foot of Cleve Hill;
- all of the adverse effects would be reversible on decommissioning;

- NPS EN-1 accepts that virtually all nationally significant energy infrastructure projects will have effects on landscape, and we do not believe any reduction in scale would be merited considering the economies of scale that are required to ensure viability; and
- taking account of the predicted significant adverse effects, and in the context of relevant policy in NPS EN-1, we consider that the adverse landscape and visual impacts weigh against the Proposed Development. In light of the above, we consider this to be a factor of moderate weight in the overall planning balance which we undertake in Chapter 10.

7. FINDINGS AND CONCLUSIONS IN RELATION TO BIODIVERSITY AND NATURE CONSERVATION

7.1. INTRODUCTION

7.1.1. This chapter addresses the effects of the Proposed Development on biodiversity and nature conservation in relation to policy requirements and the EIA Regulations. There is some overlap with matters associated with the Habitat Regulations Assessment (HRA), which are discussed in detail in Chapter 9. Some of the issues that are relevant to both contexts are summarised here to explain the reasoning behind our conclusions.

7.2. POLICY CONSIDERATIONS

National Policy Statements (NPSs)

7.2.1. At 5.3.3, NPS EN-1 requires that the Environmental Statement (ES) sets out any effects on internationally, nationally and locally designated sites of ecological or geological conservation importance, on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity. The Applicant should also demonstrate that opportunities to conserve and enhance biodiversity and geological conservation interests have been recognised (5.3.4).

7.2.2. NPS EN-1 goes on to note that when making decisions, appropriate weight should be attached to designated sites of international, national and local importance; protected species; habitats and other species of principal importance for the conservation of biodiversity; and to biodiversity and geological interests within the wider environment (5.3.8). Opportunities to secure biodiversity benefits should be maximised (5.3.15).

7.2.3. The NPS expects appropriate mitigation and enhancement to be included in the project (5.3.18). Natural England's intentions in relation to protected species licensing should be taken into account (5.3.20).

Marine Policy Statement (MPS)

7.2.4. The MPS states at 2.6.1.3 that, as a general principle, development should aim to avoid harm to marine ecology, biodiversity and geological conservation interests. It notes that development at the coast can have adverse effects on coastal and marine waters (2.6.4.1) and cautions that decision-makers should take account of any impact on Marine Protected Areas (3.1.7).

National Planning Policy Framework (NPPF)

7.2.5. Chapter 15 of the NPPF contains overarching policies for conserving and enhancing the natural environment. It indicates that planning decisions

should contribute to and enhance the natural and local environment by (in summary):

- protecting and enhancing sites of biodiversity value;
- recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services; and
- minimising impacts on and providing net gains for biodiversity.

7.2.6. Chapter 15 of the NPPF confirms that the presumption in favour of sustainable development does not apply where a proposal is likely to have a significant effect on a designated European site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the proposal will not adversely affect the integrity of the site. We consider European sites and HRA in Chapter 9.

Swale Borough Local Plan

7.2.7. In its Local Impact Report (LIR) [REP1-005], Swale Borough Council highlighted the following policies from Bearing Fruits 2031: The Swale Borough Local Plan, 2017 (The Swale Borough Local Plan), and suggested that these taken together seek to safeguard and enhance biodiversity when considering development proposals:

- Policy ST 1 - Delivering sustainable development in Swale;
- Policy CP 7 - Conserving and enhancing the natural environment, providing for green infrastructure;
- Policy DM 22 - The coast;
- Policy DM 28 - Biodiversity and geological conservation;
- Policy DM 29 - Woodland, trees and hedges; and
- Policy DM 30 - Enabling development for landscape and biodiversity enhancement.

7.2.8. We consider policies DM 28 and DM 29 to be the two most relevant policies to the Proposed Development. DM 28 requires the conservation and enhancement of biodiversity and the minimisation of impacts through development. DM 29 focusses on the value of woodland and hedges.

Canterbury District Local Plan

7.2.9. In its LIR [REP1-002], Canterbury City Council drew attention to policies LB5, LB7, LB8, LB9, LB12 and SP6 of its local plan (Canterbury District Local Plan, 2017) in relation to biodiversity. We consider the following policies to be most relevant to the Proposed Development:

- Policy LB5 – Sites of International Conservation Importance;
- Policy LB6 – Sites of Special Scientific Interest;
- Policy LB8 – Landscape Scale Biodiversity Networks;
- Policy LB9 – Protection, Mitigation, Enhancement and Increased Connectivity for Species and Habitats of Principal Importance; and
- Policy LB10 – Trees, Hedgerows and Woodland.

7.2.10. LB5 requires that sites of international nature conservation importance receive the highest levels of protection. LB6 states that planning

permission will not normally be granted for development *'which would materially harm the scientific or nature conservation interest, either directly, indirectly or cumulatively, of sites designated as a Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR) and Marine Conservation Zones (MCZ) for their nature conservation, geological, or geomorphological value.'* It goes on to note that support will be given for enhancement.

7.2.11. LB8 addresses the need to avoid the fragmentation of habitats, to protect specific landscape features of biodiversity value and to provide opportunities for enhancements. It includes consideration of any impacts of lighting. LB9 requires development to avoid loss of biodiversity and to pursue opportunities to achieve net gain.

7.2.12. LB10 focusses on the value of trees, hedgerows and woodland, and requires any landscape planting to be in keeping with local conditions.

7.3. THE APPLICANT'S CASE

7.3.1. The principal Application documents relating to biodiversity and nature conservation were:

- [APP-009]: Statutory / Non-Statutory Nature Conservation Designation Plan;
- [APP-026]: Report to Inform Appropriate Assessment;
- [APP-027]: Report to Inform Appropriate Assessment Appendices;
- [APP-038]: Environmental Statement – Ecology Chapter;
- [APP-039]: Environmental Statement – Ornithology Chapter;
- [APP-055]: Environmental Statement – Ecology Figures;
- [APP-056]: Environmental Statement – Ornithology Figures;
- [APP-203]: Environmental Statement – Outline Landscape and Biodiversity Management Plan;
- [APP-204]: Environmental Statement – Microclimate and Vegetation Desk Study;
- [APP-212]: Environmental Statement – Extended Phase 1 Habitat Survey;
- [APP-213]: Environmental Statement – Updated Extended Phase 1 Habitat Survey;
- [APP-214]: Environmental Statement – Amphibian Survey;
- [APP-215]: Environmental Statement – Habitat Suitability Index Assessment and Environmental DNA Survey;
- [APP-216]: Environmental Statement – Badger Survey;
- [APP-217]: Environmental Statement – Invertebrate Survey;
- [APP-218]: Environmental Statement – Bat Survey;
- [APP-219]: Environmental Statement – Reptile Survey;
- [APP-220]: Environmental Statement – Water Vole Survey;
- [APP-221]: Environmental Statement – Natural England Initial Advice DAS;
- [APP-222]: Environmental Statement – Letter of No Impediment Request and Response from Natural England;
- [APP-223]: Environmental Statement – Ornithology Technical Appendix;

- [APP-224]: Environmental Statement – AECOM Cleve Farm Breeding Bird Survey Report 2014 and 2015;
- [APP-225]: Environmental Statement – AECOM Cleve Farm Passage Bird Survey Report; and
- [APP-226]: Environmental Statement – AECOM Cleve Farm Winter Bird Survey Report 2013 to 2015.

7.3.2. The outline Landscape and Biodiversity Management Plan (LBMP) was refined, improved and resubmitted at most of the Examination Deadlines and culminated in the final version at Deadline 7 [REP7-013].

7.3.3. The Applicant also submitted the following documents in response to our questions, representations and questions from IPs, and to provide additional information as necessary:

Applicant’s Deadline 2 submissions;

- [REP2-009]: Response to the Examining Authority's Written Question - Appendix 3 - Evidence review of the impact of solar farms on birds, bats and general ecology;
- [REP2-010]: Response to the Examining Authority's Written Question - Appendix 4 - Potential Ecological Impacts of ground-mounted solar panels;
- [REP2-011]: Response to the Examining Authority's Written Question - Appendix 5 - Bird use of solar farms interim results;
- [REP2-012]: Response to the Examining Authority's Written Question - Appendix 6 - Arna Wood Solar Farm piling noise investigation;
- [REP2-013]: Response to the Examining Authority's Written Question - Appendix 7 - Arna Wood Solar Farm wintering bird mitigation report;
- [REP2-014]: Response to the Examining Authority's Written Question - Appendix 8 - Updated RIAA figure 2;
- [REP2-015]: Response to the Examining Authority's Written Question - Appendix 9 - EN management of The Swale SSSI;
- [REP2-016]: Response to the Examining Authority's Written Question - Appendix 10 - Elver and Eel Passes; and
- [REP2-045]: Deadline 2 Submission - Biodiversity Metric Calculations.

7.3.4. The Applicant’s response to our Written Question ExQ1.1.13 [REP2-006] included the updated Wetland Bird Survey (WeBS) counts for 2017/18 for The Swale. The previous version had been used to place numbers of brent goose, golden plover and lapwing at the Proposed Development Site in the context of the wider estuary.

Applicant’s Deadline 3 submission;

- [REP3-029]: Letters of No Impediment to the Applicant from Natural England.

Applicant’s Deadline 4 submissions;

- [REP4-020]: The Applicant's responses to the ExA's Further Written Questions (ExQ2);
- [REP4-021]: The Applicant's responses to ExQ2 - Appendices Appendix 1 - HMSG Meeting Notes - 23 August 2019;

- [REP4-022]: The Applicant's responses to ExQ2 - Appendices Appendix 2 - Carrying Capacity of the Development Site for Small Mammals;
- [REP4-023]: The Applicant's responses to ExQ2 - Appendices Appendix 3 - Northern Edge Array Spacings; and
- [REP4-052]: Written Representation by the Applicant – Biodiversity Metrics 2.0.

Applicant's Deadline 5 submission;

- [REP5-024]: Written Representation by the Applicant on Miscellaneous Environmental Issues.

Methodology

- 7.3.5. The biodiversity and nature conservation assessment was reported across two chapters of the ES. Chapter 9 [APP-039] deals with ornithology, while Chapter 8 [APP-038] deals with other aspects of biodiversity. The chapters were supported by a series of maps and figures ([APP-056] and [APP-055] respectively) and by the survey reports and other Technical Appendices listed above.
- 7.3.6. The approach is generally the same in each case. The scope was agreed through s42 consultation, the Applicant's EIA Scoping Report [APP-198] and the Planning Inspectorate's Scoping Opinion [APP-199], and close working with Natural England, Kent Wildlife Trust and the RSPB. The scope is summarised in the ES chapters in sections 9.1 [APP-039] and 8.1 [APP-038].
- 7.3.7. The worst case based on the Candidate Design set out in the ES [APP-035] was said to be assessed.
- 7.3.8. It was explained that the assessment methodology followed the standards set out by the Chartered Institute of Ecology and Environmental Management (CIEEM) in its *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* and other policy and guidance. Whilst an outdated 2016 version of the CIEEM guidance was originally quoted in the ES, the Applicant confirmed in answer to ExQ1.1.2 that the assessment did accord with the 2018 guidance. Relevant study areas were agreed for the various biodiversity interests depending on various factors such as their mobility. These were detailed in sections 9.2 and 8.2 of the ES ([APP-039] and [APP-038] respectively). The same sections went on to explain the survey methodologies that were employed, including desk studies and a wide variety of field surveys.
- 7.3.9. The assessment methodology took account of various ecological characteristics in accordance with the CIEEM recommended approach, and, in common with the other topic assessments, reached a professional opinion about the significance of each identified effect based on a matrix, in this case of effect magnitude against importance of the receptor (or 'Important Ecological Feature'). Cumulative effects were also considered.

- 7.3.10. Mitigation to reduce or eliminate any identified adverse effect was introduced by the Applicant where it considered it necessary and possible. Much of the mitigation was included in the outline LBMP [REP7-013] that sets the basis for a detailed management plan that would need to be produced for the discharge of Requirements in accordance with the agreed outline plan, as secured through the Recommended DCO.

Baseline Conditions

- 7.3.11. The baseline in relation to biodiversity and nature conservation was described in detail in the two ES chapters at sections 9.3 [APP-039] and 8.3 [APP-038]. The information included sites designated for their nature conservation value, other listed sites of value, and survey results for breeding birds, non-breeding birds, bird flight activity, habitats, European and nationally protected and notable species (great crested newt and other amphibians, bats, water vole, reptiles, badger and least lettuce), and invertebrates. The detailed survey results were included as Appendices to the ES, and figures were provided: these are listed above.
- 7.3.12. The ES recorded that part of the Proposed Development Site (though not that part that would be subject to the development of solar arrays or the electricity substation or battery compounds) included areas notified as The Swale SSSI and designated as The Swale Special Protection Area (SPA) and Ramsar site. The small section of the Proposed Development Site lying below mean high water springs also impinged on The Swale Estuary Marine Conservation Zone (MCZ).
- 7.3.13. Other identified Important Ecological Features included the South Bank of the Swale Local Nature Reserve (LNR), various bat species, water vole, great crested newt, reptiles and some invertebrates associated with The Swale Ramsar site.
- 7.3.14. The part of the Proposed Development Site that would be affected by the physical development was found to be used by a number of species that are qualifying features of The Swale SPA and Ramsar site. While the land itself was not part of the designated areas, it was identified as functionally-linked land that was used at times by the species. The surveys recorded use of the Proposed Development Site by non-breeding dark-bellied brent goose, lapwing and golden plover from the SPA and Ramsar wintering waterfowl assemblage, and marsh harrier, a component species of the SPA breeding bird assemblage. These matters are discussed in detail in Chapter 9.

Scheme Design and Embedded Mitigation

- 7.3.15. The Proposed Development includes a number of mitigation and enhancement measures that were said to be embedded in the design. These were set out at sections 9.4 [APP-039] and 8.4 [APP-038] and in the outline LBMP [REP7-013]. In practice, a number of these would require the implementation of measures set out in various management plans that could be secured through discharge of Requirements in the DCO, but they were not all inherent parts of the design that would be

secured through the making of the Order itself. Nevertheless, we are content that all of the necessary measures can be secured. They include:

- restricting built development almost wholly to arable land;
- no overhead cabling;
- no continuous lighting;
- the creation of new habitat areas including an Arable Reversion Habitat Management Area (HMA) for waterfowl;
- improved management of grazing marsh in the SSSI;
- the creation of a Lowland Grassland Meadow HMA;
- the creation of new coastal grazing marsh and grassland habitats between the solar arrays;
- a Construction Environmental Management Plan (CEMP);
- a Special Protection Area (SPA) Construction Noise Management Plan (SPA CNMP);
- hedgerow planting;
- shelterbelt and woodland planting; and
- native scrub planting.

Potential Effects, Additional Mitigation and Enhancement Measures

- 7.3.16. The assessment of potential likely significant effects was set out in sections 9.5 [APP-039] and 8.5 [APP-038] of the ES. Various types of effect were considered, such as direct losses, fragmentation, disturbance and indirect changes through factors such as hydrology, changes in water quality and the creation of new habitats in the ecology core study area. The construction, operation and decommissioning phases were considered.
- 7.3.17. Section 9.5 of the ES found no significant adverse effects in relation to ornithology [APP-039], for the Proposed Development alone, or cumulatively with other projects and plans, and that no additional mitigation measures over and above those factored into the design and outline LBMP were considered necessary.
- 7.3.18. Section 8.5 of the ES found no significant adverse effects in relation to other Important Ecological Features [APP-038], for the Proposed Development alone, or cumulatively with other developments or plans, and that no additional mitigation measures over and above those factored into the design and outline LBMP were considered necessary.
- 7.3.19. Nevertheless, the ES proposed additional enhancement measures to reduce the magnitude of non-significant adverse effects further, contribute to local Biodiversity Action Plan (BAP) targets, and to achieve a biodiversity net gain. These were set out in the outline LBMP [REP7-013] and the outline CEMP [REP7-015].
- 7.3.20. The cessation of agricultural practices on the site, especially reduced applications of pesticides and fertilisers, is predicted to result in a significant beneficial effect on invertebrates associated with the South Bank of the Swale Local Nature Reserve (LNR).

7.4. PLANNING ISSUES

Relevant Representations

- 7.4.1. Wildlife, biodiversity, habitats or nature conservation were mentioned in a large number of Relevant Representations (RRs). Some of these were from organisations including local authorities, parish and town councils, local branches of political parties, local amenity and environmental groups, the Kent Ornithological Society, the Kent Wildlife Trust, Natural England and the RSPB.
- 7.4.2. Natural England's RR [RR-826] suggested that the Applicant had made significant progress in addressing impacts on statutory designated sites but that some points of detail around mitigation measures remained to be agreed. It identified the main potential impacts on designated sites as noise and visual disturbance, dust and hydrological impacts during construction and decommissioning, and loss of functionally-linked habitat of importance to birds during operation.
- 7.4.3. The RSPB's RR [RR-841] set out an objection to the Proposed Development, giving four main reasons for concern:
- the loss of a key coastal site upon which birds from the adjacent protected Swale estuary depend;
 - a lost opportunity for long-term, sustainable management of this section of coast to address threats posed by sea-level rise;
 - the need for a full understanding of the impacts of the Proposed Development on nature conservation interests; and
 - the need for a package of measures designed to avoid damage, with all necessary legal, financial and planning guarantees in place.
- 7.4.4. Notwithstanding the objection, the RSPB engaged in discussions alongside Kent Wildlife Trust and Natural England with the Applicant as a member of its 'Habitat Management Steering Group' (HMSG) to input to the package of mitigation, monitoring and enhancement measures. The key issues that remained at the time of submitting its RR were perceived by the RSPB to be:
- the nature and magnitude of the impacts on The Swale SPA and Ramsar site;
 - the total area of functionally available habitat that is required for each impacted species versus that which is proposed, with particular reference to brent goose;
 - detailed design, prescription, management and monitoring for the proposed new habitat area; and
 - appropriate legal, financial and planning guarantees securing the mitigation and compensation measures.
- 7.4.5. In its RR [RR-799], Kent Wildlife Trust set out an objective to secure the best possible outcome for wildlife, which it believed would be a refusal of development consent on the grounds of:
- impact on functionally-linked land;

- brent goose mitigation;
- impacts on marsh harrier;
- habitat management; and
- managed realignment.

7.4.6. The Kent Ornithological Society was also opposed to the Proposed Development and set out its objections in its RR [RR-521]:

- the location was inappropriate for the scale of development in view of the international importance of The Swale;
- the Proposed Development would have a significant detrimental effect on bird populations;
- the Proposed Development would prevent managed retreat and future creation of wildlife habitat on the land; and
- it would set a dangerous precedent for future proposals within the internationally important North Kent Marshes Ramsar/SSSI/SPA site.

Local Impact Reports

Swale Borough Council

- 7.4.7. In its Local Impact Report (LIR) [REP1-005], Swale Borough Council noted that the Proposed Development Site lies immediately adjacent to areas covered by policy DM 28 of the Swale Borough Local Plan, International and National Designated Site of Biodiversity and Geological Value, and that parts, including the existing coastal defences, were within the designated area. It went on to introduce the Swale Landscape Character and Biodiversity Appraisal (2011), observing that the site falls within the Graveney Marshes landscape character area. The assessment noted that the area had little semi-natural vegetation as during the twentieth century the landscape had been transformed from traditional grazing to monoculture with limited biodiversity value, this being mainly confined to the ditches and some bird species that used the arable areas.
- 7.4.8. The LIR described the disposition of the various protected areas in relation to the Proposed Development Site and acknowledged that there was no direct impact on them, but it went on to raise the matter of effects on functionally-linked land. Swale Borough Council deferred to Natural England in relation to SPA matters but noted that Natural England's focus on these might mean that that less attention had been paid to effects on undesignated areas.
- 7.4.9. The LIR set out the biodiversity and nature conservation safeguarding and enhancement policies in the local plan. The Council 'is not clear' that the Proposed Development would have an impact on any designated area and recognised the mitigation measures to offset the impact on functionally-linked land outside the designated areas. The Council was also not clear that the Development would have an impact on any protected species, though it noted that they do occur within the site and that any impacts on their habitat would be at odds with local plan policy.
- 7.4.10. The Council believed, nevertheless, that the site's proximity to the SPA, its historic marshland nature and the fact that it was still crossed by

habitat-rich ditches, meant that it '*may well be far richer in biodiversity than much agricultural land elsewhere*'. The LIR placed particular emphasis on the possible effects on the use of the site by marsh harrier.

- 7.4.11. At 6.2.6. of the LIR, the Council concluded that, overall, '*there is no certainty that effect on wildlife will be neutral or positive, or that the aims of relevant Development Plan policies will be met*'.

Canterbury City Council

- 7.4.12. In its LIR [REP1-002], Canterbury City Council listed and described a suite of biodiversity and nature conservation policies that are included in the Canterbury District Local Plan. It mentioned the *Canterbury Landscape Character and Biodiversity Appraisal* (draft, August 2012), which identified priority habitats and strategic biodiversity networks and those areas that required conservation, restoration, reinforcement or improvement.
- 7.4.13. The Council suggested that the impact of the Proposed Development on biodiversity and designated sites within the District was a key local issue.
- 7.4.14. The LIR noted that only habitat management aspects of the Proposed Development were located within its administrative area, and reserved its position pending a greater understanding of the views of Kent County Council and Natural England.

Kent County Council

- 7.4.15. In its LIR [REP1-004], Kent County Council considered that a '*good level of ecological survey information*' is provided in the Application and was satisfied that the majority of non-arable habitats were being retained, and some enhanced. The Council's concerns focused on ground-nesting birds and use of the site by birds from adjacent designated areas. It therefore suggested a need to ensure that habitats were protected during construction and managed and monitored appropriately during the development period.
- 7.4.16. It noted that the greatest impact was potentially the loss of wintering and breeding bird habitat but deferred to Natural England on the detail of this, along with potential impacts on designated sites.

Other Representations to the Examination

- 7.4.17. This section provides a summary of the principal issues raised by IPs in relation to biodiversity and nature conservation. It excludes those relating solely to the HRA (see Chapter 9) and those relating to the interrelationships and process adequacy of the outline LBMP, outline CEMP and the Mitigation Schedule (which is covered in section 4.8 of this Report).

Ground nesting birds

- 7.4.18. Kent County Council's RR [RR-797] noted that the Proposed Development would result in the loss of habitat for ground-nesting birds

and requested clarification on the proposed mitigation. In response to our question ExQ1.1.16 on this matter [REP2-006], the Applicant referred us to Chapter 9 of the ES [APP-039]. The assessment includes the impacts of the loss of arable habitat on ground-nesting birds including lapwing, skylark and yellow wagtail. The Applicant clarified that there are no specific parts of the outline LBMP that set out mitigation measures for ground-nesting birds beyond the general aims of the HMAs [REP2-006]. The ES predicts that the residual effect would be negative and not significant, but, because of the provision of new grassland and ditch-edge habitats, including those in the Arable Reversion Habitat Management Area (AR HMA) and the Lowland Grassland Meadow Habitat Management Area (LGM HMA), the residual effect on the farmland bird assemblage generally was assessed as uncertain positive and not significant.

Letters of No Impediment (LoNIs)

- 7.4.19. Natural England's RR [RR-826] noted that the application site supports populations of water voles and great crested newts. In its Deadline 3 submission [REP3-082], Natural England told us that LoNIs for water voles and great crested newts were issued to the Applicant on 25 July 2019. Natural England confirmed that there was no impediment to the issue of a licence for great crested newts, subject to comments made on the Method Statement being incorporated into the formal licence application. Similarly, no impediment was envisaged to the issue of a licence for water voles, subject to the provision of updated survey information and comments on the Method Statement being incorporated into the formal licence application. Copies of the LoNIs for these species were submitted into the Examination by the Applicant [REP3-029].

Insects

- 7.4.20. Natural England raised initial concerns that certain aquatic insects could potentially be attracted to lay their eggs on the solar panels. In ExQ1.1.7 [PD-004], we asked the Applicant for any evidence that supported its assertion that any such impacts would not be significant [APP-026]. The Applicant [REP-006] referred us to Chapter 8 of the ES [APP-038] and cited literature. Potential impacts on the Ramsar invertebrate community are discussed in Chapter 9.
- 7.4.21. We pursued this matter with Natural England at ISH4 and, in its Deadline 3 letter [REP3-082], Natural England agreed with the Applicant that there was not likely to be a significant effect.
- 7.4.22. In a late submission [AS-056], CPRE Kent also raised the effect of light pollution on insects, referring us to recently published research in the journal Biological Conservation.

Noise disturbance of birds, including piling

- 7.4.23. Natural England expressed concerns about the clarity around noise mitigation measures and the Applicant's use of thresholds to assess the impacts of construction noise disturbance on birds, including those using

areas of The Swale SPA close to the Proposed Development Site [RR-826]. Natural England suggested a potentially more suitable approach using a change in noise levels. We explored this further through written questions and at ISH4. While the Applicant thought the suggested alternative approach unreliable, the assessment was remodelled using a more precautionary noise threshold [APP-243]. The parties held further discussions at the Habitat Management Steering Group (HMSG) to agree a revised approach.

- 7.4.24. We were told by the Applicant that the revised approach had been agreed, and that the matter had been addressed [REP4-020]. In its response to ExQ2 [REP4-069], Natural England stated that the updated outline Breeding Bird Protection Plan and outline SPA Construction Noise Management Plan [REP3-006] were now clear in respect of mitigation measures, and that these measures were considered sufficient to avoid a significant effect. This was confirmed in the signed SoCG [AS-050].

Establishment, management and adequacy of the Arable Reversion Habitat Management Area (AR HMA)

- 7.4.25. The proposed AR HMA was the key measure to mitigate the potential adverse effects on brent goose and two waders, golden plover and lapwing, and it was questioned and discussed extensively during the course of the Examination, leading to iterative refinements to the relevant sections of the outline LBMP [REP7-013].
- 7.4.26. The approach was based on matching the average, long-term bird use of the developed part of the Proposed Development Site established through EIA surveys ('bird-days') to the capacity of the AR HMA to provide an equivalent food resource. This is explained in detail in Chapter 9.

Timing of sowing

- 7.4.27. Some confusion was noted in the Application documents in respect of the timing and establishment of the proposed AR HMA and other grassland habitats. It would be important that the mitigation was available early in the construction process to accommodate displaced birds. In response to ExQ1 [REP2-006], the Applicant confirmed that the ornithological assessment assumed that the grassland in the AR HMA would be sown prior to the first winter that construction of the solar panels would take place – either pre-construction or during construction, depending on commencement date. Natural England [REP2-096] and Kent Wildlife Trust [REP2-091] sought further clarification, and we pursued this matter further at ISH4. Subsequently, the Applicant added a more detailed timetable to the Deadline 6 outline LBMP [REP6-005], and, with the reassurance that the AR HMA would be seeded before the first winter, there was general agreement with the revised schedule.

Adequacy to mitigate effects

- 7.4.28. In ExQ1 we asked the Applicant to justify the approach taken to the mitigation of effects on waterfowl that currently use the area proposed

for the solar arrays as foraging ground in some winters. In particular, we sought confirmation of the extent to which the literature cited in the ES [APP-223] was applicable to the development of an AR HMA of the proposed scale, in this geographical area, and for the particular species of birds involved.

- 7.4.29. The Applicant acknowledged a difference between the cited cases and the proposed AR HMA [REP2-006], in that the literature studies are based on established grassland, rather than reversion of arable land to grassland. However, several of the cited literature documents involved research that had the more general function of providing 'alternative feeding areas' for brent goose. The use of Defra's 2001 guidance WCA26, *Management of Damage Caused by Brent Geese*, was highlighted as being particularly relevant.
- 7.4.30. We discussed this further at ISH4 and asked for more details of the size of the cited examples. In its follow up [REP3-017], the Applicant provided evidence that these were up to some 20ha to 30ha in extent and suggested that these were comparable to the 55ha or so proposed here.
- 7.4.31. At the beginning of the Examination, Natural England told us that discussions were still on-going between the Applicant, Natural England, RSPB and the Kent Wildlife Trust about the approach that had been taken by the Applicant in respect of providing mitigation through the AR HMA for the waders' loss of resources [RR-826]. In response to ExQ1, the Applicant told us [REP2-006] that the AR HMA's under-capacity for lapwing was compensated by an over-capacity for golden plover, or in other words it was appropriate simply to combine the two species' needs. The nature conservation IPs requested further evidence that this would be the case.
- 7.4.32. Natural England recommended that the Applicant should provide additional information on the lapwing and golden plover that had been reported as foraging together in one of the key cited references (Gillings *et al*, 2007), especially if there was any indication whether competition for the same resources was likely, and whether it is appropriate to add the bird-days for the different species into a combined plover-days figure.
- 7.4.33. The Applicant contacted the lead author of the cited study and provided correspondence [AS-040]. In it, Dr Gillings noted:
- 'If the carrying capacity values are real, then it seems reasonable to me to assume that the carrying capacity for Lapwings can be added to the carrying capacity for Golden Plovers. This total "plover days" value could then be shared out according to how common the two species are relative to one another at a particular location.'*
- 7.4.34. We discussed this further at ISH6. Natural England said and later confirmed [REP5-050] that the Gillings confirmation was helpful and that it was appropriate to combine the wader numbers. Kent Wildlife Trust agreed with this conclusion [REP17-009].

- 7.4.35. In ExQ1 we also sought further information in relation to the capability of the AR HMA to provide mitigation simultaneously for brent goose and the two waders. We noted Natural England's statement in its RR [RR-826] that the waders feed on soil and surface invertebrates and that they do not compete for the same food as brent goose, which graze on vegetation, and that they could 'potentially' be accommodated on the same piece of mitigation land. However, we also noted the survey findings that there was almost no coincidence between brent goose and the two target waders in the same fields at the same time. We therefore asked the Applicant to confirm the extent to which the evidence used to design the AR HMA could be relied on to ensure successful coexistence in the requisite numbers.
- 7.4.36. The Applicant referred us to the literature review in the ES Ornithology Technical Appendix [APP-223] and told us that, as the design of the AR HMA took the preferred conditions for all three species into account, it was confident that it would provide suitable conditions for all three species to forage. We were also told that there was no evidence of segregation of the species and they are widely known to utilise the same fields at the same time.
- 7.4.37. Natural England's view [REP2-096] was that, as they eat different food, geese and waders do not compete with each other and can use the same piece of land. The crucial factor, in Natural England's opinion, was whether the intensive grassland management necessary to provide sufficient food for brent goose would hinder the waders' ability to get to earthworms and other invertebrate prey. Kent Wildlife Trust concluded [REP2-091] that there should be no direct competition between the groups.
- 7.4.38. In order to provide sufficient 'bird feeding days' for the precautionary numbers of birds that were predicted to be displaced from the developed arable land, the Applicant proposed the routine application of manure to the AR HMA to increase the grass and invertebrate biomass and thus the amount of food available to brent goose, lapwing and golden plover. The Applicant's calculations suggest that annual manure application equivalent to 50kgN/ha to grass that is grazed or cut five times per annum could support the necessary 2,097 goose-days/ha [APP-203].
- 7.4.39. Natural England agreed in its RR [RR-826] that there was evidence to support this. Kent Wildlife Trust's RR [RR-799] expressed some concerns about the relevance of the cited studies used to support the approach.
- 7.4.40. In its RR [RR-799], Kent Wildlife Trust noted a tension between this approach and the Applicant's assertion that reducing the current level of agricultural chemical use would be a beneficial effect of the Proposed Development on water quality and associated habitats. The Applicant submitted evidence [REP4-050] to suggest that the total available fertiliser nutrients at the site would reduce from nearly 210kg/ha per year currently to some 135kg/ha per year under the solar park management regime.

- 7.4.41. Kent Wildlife Trust also raised the matter of restricting manure spreading near to ditches and field boundaries to protect habitats. In its response to RRs [AS-009], the Applicant anticipated that spreading would be restricted within 10m of wet field boundaries, in line with Government guidance. This commitment would be included in the LBMP, which would be secured by Requirement 4 of the dDCO¹². It went on to state that it did not expect this to substantively reduce the total functional capacity of the AR HMA to support brent goose.
- 7.4.42. Given that the manuring of the AR HMA was a key measure for the mitigation of impacts on the three SPA bird species, we asked the Applicant to provide more certainty that the reduction in fertilised area did not significantly impact on the sufficiency of the AR HMA for the waterfowl. This was discussed at ISH4 and the Applicant followed up with more information, acknowledging that this was not accounted for in the original calculations. In response to ExQ2 [REP4-020], the Applicant told us that excluding areas within 10m of ditches around the AR HMA resulted in a reduction in carrying capacity of approximately 350 bird-days for brent goose. Natural England was content that this was not a material change [REP5-050] but Kent Wildlife Trust expressed continuing concern that the approach was not sufficiently precautionary [REP5-048].
- 7.4.43. In a signed, revised SoCG [AS-050] submitted shortly before the close of the Examination, Natural England agreed with the Applicant that the AR HMA would be sufficient to avoid an adverse effect on foraging brent goose.
- 7.4.44. In a signed, revised SoCG [REP17-009] submitted shortly before the close of the Examination, Kent Wildlife Trust did not agree with the Applicant's position on the adequacy of the AR HMA and suggested that there was a shortfall in mitigation for brent goose as measured by the peak mean mitigation requirement.

Implications of ivermectin in manure

- 7.4.45. In its RR [RR-799], Kent Wildlife Trust noted the potential impact of ivermectin in spread manure on the invertebrate biomass of the soil and hence the prey availability for the two wader species. The Applicant made changes to the outline LBMP to ensure that ivermectin-free manure was sourced 'where possible'. Through ongoing research, the Applicant demonstrated that securing ivermectin-free manure in sufficient quantities could not be guaranteed under current farming practices, so recording and monitoring of the sources and uses was added to the outline LBMP at Deadline 6 [REP6-005].
- 7.4.46. The Applicant also provided evidence following up its oral submission at ISH6 that indicated that earthworms, a principal prey item for the two waders, were less affected than many other invertebrates by ivermectin residues [REP5-024]. While the evidence suggested that ivermectin in manure could reduce the food resources for lapwing and golden plover

¹² Requirement 5 in the final dDCO [REP17-003]

when compared to ivermectin-free manure, the Applicant asserted that it had significant benefits over no-manuring, and that there was sufficient 'head-room' in the provision for the two plovers in any case.

Adequacy of marsh harrier monitoring and mitigation

- 7.4.47. The ornithological surveys reported in the ES [APP-039] and [APP-056] showed that the Proposed Development Site was used by foraging marsh harrier. While the majority of observed flight time was focussed on the peripheral ditches and reed beds behind the existing coastal defences that would not be directly affected by the solar arrays, there were some flights recorded over arable crops. There had also been nesting attempts in the wetland area.
- 7.4.48. In the Application, the Applicant explained that the grassland corridors established between the fields of solar arrays would be managed for foraging marsh harrier. The locations of this proposed 'Field Margin and Ditch Margin Habitat' were illustrated on ES Figure 9.3 [APP-056].
- 7.4.49. Natural England referred to this matter in its RR [RR-826], acknowledging an improved layout over the pre-application consultation design, as it reduced the risk that the arrays would create a barrier to foraging marsh harrier. However, we were not clear where specific details of the proposed management of this area would be provided or secured, or whether there was any evidence to suggest that marsh harrier would forage between solar arrays. We therefore included a question on this in ExQ1.
- 7.4.50. In response [REP2-006], the Applicant told us that there had been further discussions with Natural England and that the inter-array areas would be managed as grazing marsh grassland, maintained through grazing by sheep. More detail was iteratively added to the outline LBMP [REP7-013] as the Examination progressed.
- 7.4.51. The Applicant also told us that it had found no peer-reviewed, empirical evidence regarding the behaviour of marsh harrier at solar farms. Those studies that were available were considered not to be comparable situations. However, research on bird populations at solar farms is being carried out by the RSPB Centre for Conservation Science in association with a solar developer, and a blog post that discusses preliminary results suggested that raptors continue to forage over solar farms, with red kite, kestrel, sparrowhawk and buzzard all recorded over the solar panels [REP2-011].
- 7.4.52. An IP with a background in nature conservation work locally, Mr Gomes, made an oral submission at OFH2 [REP2-072] and written submissions [REP3-057] in which he suggested that the Proposed Development would change the behaviour of marsh harrier, such that they would be unlikely to use the Proposed Development Site. He was concerned that the corridors of grassland would be too funnelled and narrow for the birds, and that there would be changes in recreational use of the area around the site that would also have an adverse effect.

- 7.4.53. Given this uncertainty, we asked the Applicant at ISH4 whether there should be a programme for monitoring of marsh harrier behaviour and, if so, what the remedial actions might be in the event that behavioural changes or displacement of marsh harrier was seen. The Applicant agreed to address this in an updated version of the outline LBMP for Deadline 3.
- 7.4.54. Following up ISH4 discussions, Natural England submitted a summary view [REP3-082] that the Applicant should ensure no net loss of foraging resource for marsh harrier. The submission went on to suggest that further information was required to demonstrate that the proposed habitat enhancements would result in more food such as small mammals for marsh harrier in both the grassy ditch corridors and the AR HMA. It also noted, however, that if marsh harrier were to be deterred from using the site by the presence of the panels, this food would not be available to them.
- 7.4.55. Natural England suggested that the Applicant could calculate the carrying capacity of the Proposed Development Site for marsh harrier before and after the proposal and the amount of prey likely to be provided by the different parts of the area, with a view to demonstrating the change in habitat quality and how much food would be provided in different parts of the site. Further clarification was sought on the northern end of the corridors to determine if they would be wide enough to avoid deterrence of the birds from entering the site from the habitat along the borrow dyke behind the existing coastal defences.
- 7.4.56. We followed up the discussions and summarised the outstanding concerns in a question at ExQ2.
- 7.4.57. At Deadline 4, the Applicant provided an outline LBMP [REP4-007] with corrections and updates in relation to marsh harrier, a document that clarified the size and spacings of the grassy corridors at their northern ends [REP4-023], and the requested study, '*Carrying Capacity of the Development Site for Small Mammals*' [REP4-022]. The study concluded that the grazing marsh grassland between the solar arrays would have a significantly greater carrying capacity for small mammals than the replaced arable land, while the grassland cover beneath the solar panels would have a similar carrying capacity to the existing arable land.
- 7.4.58. In its response to Deadline 3 submissions [REP4-041], the Applicant accepted many of Mr Gomes' points but noted that there was a difference between them in terms of interpretation of effects. The Applicant remained of the view that:

'..... the inter-array grassland areas are sufficiently large to support foraging marsh harriers and that they will not be deterred from entering the areas between the solar arrays. The Applicant has acknowledged that there is an absence of evidence in the scientific literature either way (acceptance or deterrence) to inform the assessment in relation to the reaction of marsh harriers to the presence of solar panels.'

- 7.4.59. Given the continuing differences and other IPs' lack of confidence in the proposed monitoring and adaptive management provisions for marsh harrier in the outline LBMP (for example, Kent Wildlife Trust [REP4-068]), we went on to consider this matter further at ISH6. The likelihood that the corridors between fields would be used by marsh harrier was discussed. No consensus was achieved in the absence of any comparable empirical studies, and it was clear that professional opinions varied. The Applicant agreed to discuss this further with the Habitat Management Steering Group (HMSG) and acknowledged that a more detailed programme of behavioural monitoring and an ability to respond to any future behavioural changes would be a useful way forward.
- 7.4.60. The Deadline 6 version of the outline LBMP [REP6-005] included additional behavioural monitoring and flight surveys for marsh harrier, and small mammal sampling surveys to inform triggers and remedial actions. The Applicant had agreed with the members of the HMSG that it was too complex to set such triggers and responses in advance, and that the Group would continue to meet going forward if the Order was made and the Proposed Development built. It would have a formalised role to deal with these matters, to discuss monitoring results, and to respond to any perceived issues with marsh harrier use of the site. The role, constitution and other governance arrangements for the Group would be secured through the Order in Requirement 5. This approach was agreed in the SoCGs with Kent Wildlife Trust [REP17-009] and Natural England [AS-050].
- 7.4.61. Natural England also suggested that the Applicant might wish to consider off-site mitigation as a precautionary measure [REP5-050] but, at Deadline 6 [REP6-015], the Applicant confirmed its position that further measures were not necessary.
- 7.4.62. Other IPs also submitted comments on the matter, including: the Graveney Rural Environment Action Team (GREAT) [REP7-097], which added its own analysis of some of the background research papers that had been previously cited, highlighting the ongoing uncertainties; CPRE Kent [REP7-081], who asserted that many of the cited scientific papers 'strongly indicate' that marsh harrier are highly likely to be negatively affected; and, the Faversham and Swale East Branch of the Labour Party, which questioned the Applicant's conclusion that there would be no adverse effect on marsh harrier 'beyond reasonable scientific doubt'. The Applicant subsequently addressed each of these in its response to Deadline 7 submissions [REP17-007].
- 7.4.63. With ongoing concerns that principally related to the HRA, we included a question about marsh harrier in our Rule 17 request [PD-009]. We asked the Applicant to provide estimates of the proportion of foraging habitat that would be lost to marsh harrier as a result of the Proposed Development, in the context of the foraging habitat currently protected by The Swale SPA designation together with the recognised functionally-linked foraging land available to The Swale SPA population. We asked for two estimates, the first assuming that marsh harrier did use the corridors between the solar arrays, and the second that they did not.

- 7.4.64. We asked the Applicant to communicate the results to Natural England and Kent Wildlife Trust sufficiently in advance of Deadline 7 to allow them to provide us with a response.
- 7.4.65. The Applicant subsequently submitted a Written Representation (WR) on the marsh harrier ([REP7-037], updated as [REP17-013]). This report summarised the background and context, the position that had been reached by the parties, and addressed our question.
- 7.4.66. In summary, if marsh harrier were not dissuaded from foraging in the inter-array corridors between the fields containing the solar arrays, the report estimated that some 3.3% of the total available foraging habitat in and around the SPA would be lost to the birds as a result of the Proposed Development. The Applicant contended that the improved inter-array grassland habitats would mitigate this.
- 7.4.67. If marsh harrier were dissuaded from foraging in the inter-array corridors between the fields containing the solar arrays, approximately 3.9% of the potential foraging habitat of all types available to marsh harrier from the SPA population would be lost. This was said to be an effective loss of 1 or 2 pairs from the SPA population, which was generally increasing (3.9% of 24-42 pairs).
- 7.4.68. In the event, the Applicant focussed pre-submission discussions on this report with Natural England and, in an updated, signed SoCG [AS-050], Natural England expressed a view that there was sufficient precaution built into the assumptions to avoid significant effects. It suggested that *'at least some individuals are likely to overcome any reticence towards the presence of the solar panels, if a plentiful food supply is provided'*.
- 7.4.69. Kent Wildlife Trust was given a shorter opportunity to comment on the study. In its submission at Deadline 7 [REP7-107] it welcomed the updated commitments to marsh harrier monitoring and responsive measures but noted that the outline LBMP was still devoid of measures to deal with the potential displacement of marsh harrier by the solar panels. The signed, revised SoCG [REP17-009] notes that Kent Wildlife Trust did not agree with the Applicant's position on marsh harrier and suggested that uncertainty remained.

Adequacy of monitoring and adaptive land management proposals in the outline LBMP

- 7.4.70. From its earliest iterations [APP-203], the outline LBMP included several factors that were scheduled for monitoring, with 'adaptive land management measures' introduced if any adverse results became apparent through monitoring. The triggers for, and the details of, most of these measures were unclear to us - for example 'successful grass establishment'. We therefore included a question in ExQ1 and followed up in discussions at ISH4, where it was clear that some IPs such as Natural England and Kent Wildlife Trust also sought greater clarity or detail on some of the proposed monitoring schedules as well as the triggers and adaptive measures.

- 7.4.71. Most of the necessary detail was added to the outline LBMP over successive iterations at Examination Deadlines, though discussions between the Applicant and the HMSG identified that, for some matters, *'there are too many permutations to set out specific triggers at the outset'* [REP4-020]. However, Kent Wildlife Trust [REP4-068] and Natural England [REP4-069] were both looking for greater certainty that the necessary measures would be put in place if necessary, and we sought a mechanism for ensuring that they could be secured through the Recommended DCO.
- 7.4.72. At ISH6 we discussed an approach whereby the HMSG would be formally constituted and meet regularly during and post-construction to discuss monitoring survey results and to agree any triggers and responsive measures that might become necessary in respect of those factors that could not sensibly be articulated in advance.
- 7.4.73. The Deadline 6 outline LBMP submitted by the Applicant [REP6-005] had sections inserted for this purpose but they were still blank pending further discussions and agreement between the Applicant and the members of the HMSG around the detail of the role and governance of the Group.
- 7.4.74. We continued to pursue this through the Rule 17 request and an updated version of the outline LBMP was submitted with the details complete [REP7-013]. Natural England [AS-050] and Kent Wildlife Trust [REP17-009] agreed that these details were sufficient for an outline plan in their respective SoCG with the Applicant.

European eels

- 7.4.75. Having raised the matter of European eels in his RR [RR-148], an IP, Mr Hatchwell spoke at OFH1, telling us that he was aware of the presence of this critically endangered (Red List of the International Union for the Conservation of Nature) and UK Biodiversity Action Plan Priority Species at the Proposed Development Site. He noted its importance and suggested that the drainage channels within the site were protected and that any new water level control structures should comply with legal requirements to permit the safe passage of elvers and eels.
- 7.4.76. In ExQ1.1.47 [PD-004], we asked the Applicant and the Environment Agency about this. The Environment Agency confirmed the presence of eels in the water courses to the east of the site and suggested that it would be important to maintain the Nagden Sluice to allow their safe passage [REP2-071]. The Applicant's response [REP2-006] was that culverts would be designed to allow the safe passage of eels in accordance with current guidance (*Elver and eel passes - a guide to the design and implementation of passage solutions at weirs, tidal gates and sluices*) [REP2-016] and the Eels Regulations (2009).
- 7.4.77. At ISH4, the Applicant acknowledged the presence of eels and the need for new water control structures and culverts to be designed to allow the safe passage of eels and fish. The outline LBMP was updated accordingly at Deadline 3 [REP3-005].

7.4.78. We asked further questions at ExQ2 and in our Rule 17 request [PD-009] to ensure that the necessary detail was added, to check the implications of any eels being present in a ditch that was to be lost to the electricity substation development, and to ensure that both the Applicant and the Environment Agency were content that the Eels Regulations could be complied with. Given the need to conform with this legislation, the Applicant was content with the plans that it had put forward [REP5-024] and noted that further wording had been added to the outline LBMP at Deadline 7 [REP7-030]. The Environment Agency's response to the Rule 17 request [REP7-086] was:

'We can confirm that we are content that the content of the Outline LBMP complies with The Eels Regulations 2009. The applicant has addressed the need to make any newly constructed water level management control structures eel/ elver friendly (passable) and state they will ensure any new ditch/ habitat creation is the same – both for construction and operational phases. We are satisfied with these plans.'

Hazel dormouse

7.4.79. In a WR [REP2-065], CPRE Kent stated that hazel dormouse, a protected species, was present on the Proposed Development Site and suggested that this had been overlooked by the Applicant in the ES. We put this to the Applicant at ISH4 and were told that it was not definitive that the nest was made by a dormouse. The Applicant considered the habitat to be suboptimal and that the area was, in any case, in a peripheral part of the Proposed Development Site.

7.4.80. Natural England [REP3-082] noted the dormouse record supplied by CPRE Kent and advised that a dormouse mitigation licence would be required if there was likely to be an impact on dormice that would otherwise be illegal. Natural England recommended that the Applicant should consider the location of the breeding record and whether there would be any impact from the Proposed Development on habitat potentially used as breeding or resting places, even if that habitat would normally be considered sub-optimal.

7.4.81. In ExQ2, we asked the Applicant to provide an update on discussions with CPRE Kent in relation to its record for hazel dormouse, and if there was an intention to explore mitigation and licensing requirements. At ISH6, the Applicant reported that a surveyor would be going out to inspect the site. Following that inspection, the Applicant concluded [REP5-024] that: the location is outside the area that would be affected by the construction and operation of the Proposed Development; the nest recorded by CPRE Kent is very unlikely to be a dormouse nest; and that no further action is necessary, beyond the usual pre-construction checks for protected species, as necessitated by draft Requirement 14. Photographs of the nest site were provided [REP5-024], allowing us to confirm that we had seen this area during an USI [EV-002].

7.5. ExA RESPONSE

Procedure and Approach

- 7.5.1. We have taken careful account of the views of the local planning authorities and IPs, especially the nature conservation organisations that came together to form the Habitat Management Steering Group (HMSG).
- 7.5.2. Despite some minor variations from the quoted guidance we are content that the Applicant's approach to biodiversity surveys and assessment was satisfactory. While some of the surveys were a little dated, an updated Phase 1 Habitat Survey [APP-213] indicated that the baseline had not changed materially.
- 7.5.3. We are content that, by the end of the Examination, the evidence before us was sufficient to satisfy the information requirements of the Marine Policy Statement, NPS EN-1 and the remainder of the policy framework in relation to effects on internationally, nationally and locally designated sites of ecological conservation importance, protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity. As detailed below, in accordance with policy, the Applicant has also demonstrated that opportunities to conserve and enhance biodiversity conservation interests have been recognised.

Effects on Internationally Designated Sites of Ecological Importance

- 7.5.4. In considering ecological matters, we have given great weight to the potential effects of the Proposed Development on internationally designated sites and are conscious that the policy framework expects the highest levels of protection to be afforded to such areas.
- 7.5.5. Further analysis is set out in Chapter 9 in relation to the HRA, but for the purposes of the EIA, we focussed on construction noise impacts and the potential disturbance of birds associated with The Swale Special Protection Area (SPA) and Ramsar site, the proposal that the Applicant should take on the maintenance of the existing coastal defences, and the loss of land and resources that are functionally linked to the Swale SPA and Ramsar site.
- 7.5.6. Following our questions, discussions during the Examination and further consultation with Natural England and the other nature conservation interests, the Applicant adopted a more precautionary approach to limiting construction noise in the vicinity of the designated site. We are satisfied that the measures in the outline Breeding Bird Protection and SPA Construction Noise Management Plans [REP7-015] and [REP7-019] are sufficient to avoid a significant impact and note that Natural England concurs with this view [AS-050].
- 7.5.7. We are also content that the Recommended DCO provides adequate protection for The Swale SPA and Ramsar site and the Swale and

Medway European Marine Site in relation to the Applicant's proposal to take responsibility for the maintenance of the existing coastal flood defences. Any works or activities would be limited to those currently available to the Environment Agency. We note that the Marine Management Organisation [AS-028] is satisfied in this regard, while we heard similar concurrence from the Environment Agency during the course of the Examination [RR-507].

- 7.5.8. A good deal of Examination time was dedicated to our consideration of impacts on functionally-linked land that lies outside The Swale SPA designated area, but is used by some of its qualifying interests, specifically dark-bellied brent goose, lapwing, golden plover and marsh harrier. The detail of proposed mitigation measures, monitoring, triggers for further action and adaptive management increased incrementally over the course of the Examination, as the Applicant responded to questions, representations, discussions and some very helpful, ongoing consultations with members of the HMSG.
- 7.5.9. As a result, we have been able to focus on the key issues in respect of functionally-linked habitats and how the Applicant could refine the relevant proposals in the outline LBMP and associated management plans. By the end of the Examination there was a general consensus between the Applicant, Natural England [AS-050] and, with minor reservations, Kent Wildlife Trust [REP17-009] in relation to the necessary mitigation measures for the three species of waterfowl. We are satisfied that the Recommended DCO and associated management plans provide appropriate mitigation measures such that these three species and the waterfowl assemblage of The Swale SPA and Ramsar site generally are protected from significant effects.
- 7.5.10. While Kent Wildlife Trust and other IPs were not in agreement with the Applicant in relation to potential impacts on functionally-linked land for marsh harrier, Natural England found the assessment and proposed mitigation measures to be sufficiently precautionary to be able to indicate satisfaction that marsh harrier interests were also protected [AS-050].
- 7.5.11. We have taken account of all the evidence and opinion put before us in relation to marsh harrier, including:
- the uncertainties around the potential effect of the solar park on marsh harrier behaviour;
 - the Applicant's precautionary approach to the assessment;
 - the relatively low baseline level of use by marsh harrier of the arable land that would be given over to solar arrays;
 - the potential benefits offered by new and improved grassland and ditch habitats;
 - the geographical position and extent of the affected functionally-linked habitats in relation to the wider designated areas and other associated functionally-linked land available to the marsh harrier flock; and
 - the proposed monitoring and ongoing forum for the discussion of possible responsive measures if required.

- 7.5.12. On balance, we are content that the Proposed Development is unlikely to cause any significant effects on marsh harrier.

Effects on Nationally Designated Sites of Ecological Importance

- 7.5.13. Part of the proposed Order area that is not put forward for development lies within land notified as The Swale SSSI. While no direct impacts were predicted, the Applicant, Natural England and Kent Wildlife Trust identified opportunities for enhanced management and for an integrated approach to factors such as water level control that would provide a holistic benefit to the ecological value of the SSSI, the proposed Arable Reversion Habitat Management Area (AR HMA), and the proposed grassland and ditch habitats within and around the solar array area.
- 7.5.14. We have attached considerable weight to matters concerning this nationally important nature conservation notification.
- 7.5.15. Having provided us with details of the current management of the land, the Applicant included the proposed enhancements and future management regime for that part of the SSSI land within the Order limits in its evolving outline LBMP [REP7-013], which can be secured through Requirement 5 in the Recommended DCO. The Applicant firmed up the proposals in response to our questions and discussions with the nature conservation bodies and reached agreement over the matter with Kent Wildlife Trust [REP17-009] and Natural England [AS-050].
- 7.5.16. We are satisfied that the Proposed Development and enhancement measures included in the outline LBMP are compatible with the interest features and wider management of the Swale SSSI. With proper implementation, wider biodiversity conservation benefits could accrue, though we note that the two SSSI units in question are already assessed as being in favourable condition.

Effects on Locally Designated Sites of Ecological Importance

- 7.5.17. No significant effects on locally designated sites were identified in the ES, and none were brought to our attention.

Protected Species

- 7.5.18. In accordance with NPS EN-1 requirements, we have explored Natural England's intentions in relation to protected species licensing and are content that the LoNI provide sufficient assurance that the necessary licensing could be achieved.
- 7.5.19. We have examined the conflicting evidence around hazel dormouse carefully and accept the Applicant's interpretation of the matter. We do not expect any significant adverse effects on the species. As such, we attach very little weight to CPRE Kent's dormouse nest record.

- 7.5.20. We have considered the representations from Mr Hatchwell about European eel and the responses from the Applicant and the Environment Agency. We note the incremental improvements to elver and eel mitigation made by the Applicant through various iterations of the outline LBMP, and the requirement for construction activities to comply with the Eels Regulations. We also note that the relevant regulator is content. As such, we believe that all pertinent concerns in relation to European eel have been addressed and consider that a significant adverse effect on this species is not likely.
- 7.5.21. Overall, given the information provided by the Applicant, the situation with protected species licensing by Natural England, and our conclusions on dormouse and European eel, we are satisfied that relevant policy requirements, in relation to protected species, including NPS EN-1, are met.

Effects on Habitats and Other Species Identified as Being of Principal Importance for the Conservation of Biodiversity

- 7.5.22. We have considered Kent County Council's concern about the loss of habitat for ground-nesting birds and are content that the Applicant's assessment adequately covers the matter. While the specific effect would be negative, it would not be significant, and we have considered this in the context of the positive effect for the wider farmland bird assemblage of the proposed grassland, reedbed and ditch habitats. As such, we attach little weight to the matter.

Opportunities to Conserve and Enhance Biodiversity

- 7.5.23. We are satisfied that the Applicant has identified and committed to opportunities for biodiversity enhancement in addition to necessary mitigation measures, in line with NPS EN-1 and local plan policy requirements. These include new reedbed, better management of the SSSI, grassland, wetland, hedge, tree and scrub habitat management areas. We have also given appropriate weight to the predicted beneficial effects of a reduction in the intensity of agricultural management for watercourses and the marine environment.
- 7.5.24. We have considered Swale Borough Council's submissions on environmental net gain [REP3-056] and the Applicant's response that biodiversity and wider environmental net gain should be a legitimate aspiration for this NSIP project [REP5-015]. In balancing the biodiversity effects of the Proposed Development, we have given some weight to the biodiversity metric calculations submitted by the Applicant [REP4-052] that predict a biodiversity net gain of 65% for habitat biodiversity units, and a net gain of 7,870% in hedgerow habitat biodiversity units.

Mitigation and Enhancement

- 7.5.25. NPS EN-1 and the local plans expect appropriate mitigation and enhancement to be included in the project.

7.5.26. The Application documents include a number of proposals for the mitigation of predicted significant adverse effects on biodiversity and nature conservation interests, mostly set out in an outline LBMP and an outline CEMP. These were lacking in sufficient detail at submission, and, as noted earlier, the Applicant expanded them incrementally at various Examination Deadlines.

The Arable Reversion Habitat Management Area (AR HMA)

7.5.27. The ES predicted potential significant adverse effects on three species of waterfowl associated with the Swale SPA and Ramsar site, and we have given much consideration and a high level of weight to the proposals for the mitigation of these. The key proposed mitigation measure is the AR HMA.

7.5.28. Over the course of the Examination the Applicant firmed up the details of the intended programme for sowing and establishing the grassland sward in the AR HMA to ensure that the mitigation would be available in the first winter when construction activity was underway and there was a potential to disturb and displace the birds.

7.5.29. There were lengthy discussions about the use of manure to fertilise the AR HMA, including the rate of application to ensure sufficient carrying capacity for the displaced birds, the protection of watercourses from pollution and the implications of ivermectin residues on the prey species of lapwing and golden plover. Proposals for the management of the AR HMA were developed using published scientific research as a basis for ensuring that the mitigation would be effective for brent goose and lapwing and golden plover.

7.5.30. By the close of Examination, there was generally a consensus that there was enough detail in the outline LBMP to ensure that adequate mitigation could be secured through the DCO Requirements, though Kent Wildlife Trust retained some concerns about the rate of manure application. We are satisfied that the outline management plans contain sufficient breadth and detail in relation to the establishment and management of the AR HMA to provide a basis for any later detailed management plans, such that these would provide effective mitigation for the displaced birds from the SPA and Ramsar site flock. We are also content that such measures could be secured through the LBMP and Requirement 5 of the Recommended DCO.

Marsh harrier

7.5.31. Given the species' association with The Swale SPA, we have also given a great deal of consideration to the implications of the proposed mitigation measures for marsh harrier and attached considerable weight to their likely adequacy. We have taken note of the proposed monitoring and methodology for considering triggers and adaptive land management responses through the formally constituted HMSG.

7.5.32. In the absence of peer-reviewed, empirical evidence regarding the behaviour of marsh harrier at solar farms and associated mitigation

measures, we have taken great care to consider the representations made to us about possible changes in foraging behaviour once the solar PV arrays have been built, the potential for displacement of birds from the site, and the proposed monitoring and adaptive mitigation measures.

7.5.33. We are aware that some IPs, including Kent Wildlife Trust, believe that the presence of the solar PV arrays is likely to dissuade marsh harrier from using the existing and proposed mitigation grassland and ditch habitats. We have read the grey literature and pre-publication research reports provided by the Applicant and others, and have heard the evidence of Natural England, which we understand was guided by the organisation's relevant experts in the field.

7.5.34. On balance, we are content that the Recommended DCO and associated outline management plans include sufficient provision to mitigate likely significant effects on marsh harrier.

Other mitigation proposals

7.5.35. During the Examination, the Applicant developed its proposals for mitigation in relation to several other habitats and species. We have applied appropriate weight when considering these measures.

7.5.36. In particular, we note the development of the design and management of the Proposed Development to ensure the protection of European eel and water vole.

7.5.37. We are satisfied that the proposed measures set out in the outline LBMP in tandem with the need for protected species licensing in advance of any relevant work provide sufficient protection for other biodiversity and nature conservation interests.

Other Biodiversity and Nature Conservation Matters

7.5.38. At the beginning of the Examination (ExQ1.1.8 [PD-004]) we sought information about possible problems with birds flying into the solar panels and being killed or injured. While neither the Applicant [REP2-006] nor IPs (for example, [REP2-091] and [REP2-096]) were aware of any monitoring at directly comparable, existing, solar farms, we are satisfied that the small amount of scientific and grey literature available suggests that bird collision risk from solar panels is very low, and we have attached little weight to this matter.

7.5.39. We have also considered the submissions made to us about aquatic insect attraction to the solar panels [REP3-082], and more generally about the effect of lighting on insects [AS-056]. We accept the evidence put forward by the Applicant that the spatial relationship between the ditch habitats and the solar panels would mean that interaction would be most unlikely and are content that lighting will only be operated in occasional circumstances. As such we have attached very little weight to these matters.

7.6. CONCLUSIONS

- 7.6.1. The matter of biodiversity and nature conservation was a major consideration in the Examination, generating many RRs, WRs and other submissions to us.
- 7.6.2. The Proposed Development Site is adjacent to, and partially within, designated areas of very high importance for nature conservation, and itself attracts a good variety of wildlife, including birds from the adjacent protected areas.
- 7.6.3. We have fully considered biodiversity and nature conservation issues in this chapter and in the section on HRA (Chapter 9) and, in accordance with NPS EN-1, given appropriate weight to each of the matters raised in the Application and during the Examination. We have taken full account of the views put to us by the relevant statutory nature conservation body, Natural England.
- 7.6.4. The ES identified several potential adverse impacts, including some on ecological interest features of European and nationally designated sites. However, the ES concludes that with the proposed mitigation, no significant adverse effects are likely to occur.
- 7.6.5. With the assistance of the nature conservation bodies brought together into a Habitat Management Steering Group (HMSG), the Applicant incrementally improved the mitigation measures designed to address these potential effects throughout the course of the Examination, especially the breadth and detail of coverage of the outline LBMP.
- 7.6.6. While not achieving a full consensus on all issues, by the close of the Examination we are satisfied that the Applicant's proposals for monitoring and mitigation are properly secured and that they adequately address each of the identified potential impacts on biodiversity and nature conservation, such that there are no residual significant adverse effects. We are also content that the Proposed Development will not add to any significant cumulative effects with other projects and plans.
- 7.6.7. With adequate mitigation secured through the Recommended DCO, we consider that the Proposed Development accords with the relevant legislative and policy requirements and find no grounds for refusal on the basis of biodiversity and nature conservation. This is therefore a neutral factor to be carried into the planning balance. Our conclusions on HRA are addressed separately in Chapter 9.

8. FINDINGS AND CONCLUSIONS IN RELATION TO THE REMAINING PLANNING ISSUES

8.1. CULTURAL HERITAGE

Introduction

- 8.1.1. This section considers the likely significant effects resulting from the Proposed Development on designated and non-designated heritage assets including listed buildings, conservation areas, scheduled monuments and buried archaeological sites. It also assesses impacts on historic landscape character.

Legislation and Policy Considerations

The Infrastructure Planning (Decisions) Regulations 2010

- 8.1.2. Regulation 3, under the heading '*Listed buildings, conservation areas and scheduled monuments*' requires:

- 1) *When deciding an application which affects a listed building or its setting, the decision-maker must have regard to the desirability of preserving the listed building or its setting or any features of special architectural or historic interest which it possesses.*
- 2) *When deciding an application relating to a conservation area, the decision-maker must have regard to the desirability of preserving or enhancing the character or appearance of that area.*
- 3) *When deciding an application for development consent which affects or is likely to affect a scheduled monument or its setting, the decision-maker must have regard to the desirability of preserving the scheduled monument or its setting.*

National Policy Statements (NPSs)

- 8.1.3. Paragraph 5.8.2 of NPS EN-1 explains that the historic environment includes all aspects of the environment resulting from the interaction between people and places through time. It recognises that heritage assets are those elements of the historic environment that hold value through their historic, archaeological, architectural or artistic interest: they may be a building, monument, site, place, area or landscape. The sum of an asset's heritage interest is referred to as its significance.
- 8.1.4. Paragraph 5.8.8 requires applicants to assess the significance of the heritage assets affected by a proposed development and the contribution of their setting to that significance. It indicates that the level of detail should be proportionate to the importance of the heritage assets and no more than is sufficient to understand the potential impact of the proposal on the significance of the heritage asset.
- 8.1.5. Paragraph 5.8.9 sets out that where a development site includes, or where it has the potential to include, heritage assets with an

archaeological interest, applicants should undertake a desk-based assessment. A field evaluation should follow where the exercise is insufficient to assess interest properly.

- 8.1.6. Subsequent paragraphs guide consideration of the impact of a proposed development on heritage assets and confirm that there should be a presumption in favour of the conservation of designated heritage assets. In circumstances where an application does not preserve those elements of setting which make a positive contribution to the significance of an asset, any negative effects should be weighed against the wider benefits of the application. The greater the negative impact on the significance of the designated heritage asset, the greater the benefits that will be needed to justify approval.

National Planning Policy Framework (NPPF)

- 8.1.7. The NPPF describes the setting of a heritage asset as the surroundings in which a heritage asset is experienced. It recognises the need to conserve heritage assets in a manner appropriate to their significance, to which great weight is given.

The Development Plan

- 8.1.8. The following policies are considered to be relevant.

- 8.1.9. Bearing Fruits 2031; The Swale Borough Local Plan, adopted July 2017:

- Policy DM 32 – Development involving listed buildings;
- Policy DM 33 – Development affecting a conservation area;
- Policy DM 34 – Scheduled Monuments and archaeological sites.

- 8.1.10. These policies, in short, seek to:

- preserve the special architectural or historic interest of listed buildings and their settings;
- preserve or enhance all features which contribute positively to the special character or appearance of conservation areas;
- protect Scheduled Monuments and their settings; and
- safeguard important archaeological sites through *in-situ* preservation and, where *in-situ* preservation is not justified, to secure appropriate investigation and recording.

- 8.1.11. Canterbury District Local Plan, adopted July 2017:

- Policy HE1 - Historic Environment and Heritage Assets;
- Policy HE4 – Listed Buildings;
- Policy HE6 – Conservation Areas;
- Policy HE8 - Heritage Assets in Conservation Area;
- Policy HE11 – Archaeology;
- Policy HE12 – Areas of Archaeological Interest; and
- Policy HE13 - Historic Landscapes, Parks and Gardens.

- 8.1.12. These policies contain similar provisions and are broadly consistent with the NPPF and NPS EN-1 and also s66 and s72 of the Planning (Listed Buildings and Conservation Areas) Act 1990.

The Applicant's Case

- 8.1.13. The principal Application documents of relevance were:

- [APP-011]: Statutory/Non-statutory Historic Environment Designations Plan;
- [APP-041]: Environmental Statement - Cultural Heritage and Archaeology Chapter;
- [APP-230]: Environmental Statement - Historic Environment Desk Based Assessment;
- [APP-231]: Environmental Statement - Geoarchaeological Borehole Study; and
- [APP-257]: Heritage Statement.

- 8.1.14. Documents subsequently submitted into the Examination by the Applicant on this topic included:

- [AS-027]: written representation on heritage policy;
- [REP3-027]: landscape and visual cross sections;
- [REP3-028]: further additional cultural heritage visualisations;
- [REP4-025]: extract - Nagden Bump;
- [REP4-029]: additional cross section from the western bank of Faversham Creek and from the churchyard of the Church of St Thomas the Apostle, Harty;
- [REP4-038]: Statement of Common Ground between the Applicant and Historic England; and
- [REP5-025]: further cross-section.

- 8.1.15. Chapter 11 of the Environmental Statement (ES) [APP-041] assessed the effects of the Proposed Development on cultural heritage, archaeological assets and historic landscape character. It set out a Core Archaeological Study Area (CASA), within which construction activity was proposed, a Principal Archaeological Study Area (PASA), extending 1km beyond the development boundary, and a Wider Archaeological Study Area (WASA), extending up to 5km. The areas beyond the site were defined with a view to identifying designated heritage assets in the wider area that might experience an effect on their significance as a result of development within their setting.

- 8.1.16. The appropriateness of the Study Areas was agreed with Statutory Consultees ([APP-041], Tables 11.1a/b) and, following receipt of responses to the Preliminary Environmental Impact Report (PEIR), the setting of Whitstable, beyond 5km, and Warm House, Graveney, a non-designated asset close to the Proposed Development Site, were included for assessment. No effect was predicted to occur on the historic setting of Whitstable. Impact on the largely rural setting of Warm House was found to be minor and not significant.

- 8.1.17. There were no designated heritage assets within the CASA [APP-011] and [APP-230].
- 8.1.18. The PASA contained one grade 1 listed building, ten grade II listed buildings, and three conservation areas. Chapter 11 of the ES [APP-041] identified significant effects on All Saints Church, Graveney (grade I), Graveney Court, Graveney (grade II), Sparrow Court, Graveney (grade II), and Graveney Church Conservation Area.
- 8.1.19. The WASA included ten grade 1 listed buildings, 34 grade II* listed buildings, 534 grade II listed buildings, 13 scheduled monuments, one grade II Registered Park and Garden, and 15 conservation areas. No significant effects were predicted.
- 8.1.20. The Heritage Statement [APP-257] assessed the identified indirect effects of the Proposed Development on the significance of the above cultural heritage assets in NPPF terms and also in accordance with the Infrastructure Planning (Decisions) Regulations 2010. In summary, it recorded less than substantial harm to All Saints Church, Graveney Court and Sparrow Court, Graveney. It also found less than substantial harm, at the lower end of the scale, to the contribution of setting to the character or appearance of the Graveney Church Conservation Area as impacts would be restricted to the northern part of the designated area.
- 8.1.21. The CASA contained one non-designated built heritage asset, a World War 2 (WWII) pillbox ([REP3-005], Appendix I) located at the southern edge of the site. It was intended to preserve it *in-situ* as a bat roost should the Development Consent Order be granted. However, the Applicant acknowledged that there would be a significant indirect effect resulting from a fundamental change in its setting, and a consequent reduction in the contribution of setting, leading to a loss of significance, and substantial harm in NPPF terms.
- 8.1.22. Archaeological studies and investigations associated with the construction of the London Array substation, and related connection cables, supplemented the Historic Environment Record for the area and studies undertaken by the Applicant. A Neolithic site was recorded 74m to the west of the CASA boundary. Finds within the CASA included a Neolithic tranchet and Iron Age and Roman pottery.
- 8.1.23. Flint implements had been recovered from the foreshore of The Swale. Timber revetments exposed on the eastern bank of Faversham Creek revealed fragments of Roman ceramic building material and medieval tile fragments. A well-preserved wooden boat dating to 895AD was found at the edge of a creek to the east of the CASA.
- 8.1.24. The settlement of Graveney is recorded in the Domesday Book of 1086. Some of its medieval buildings remained and there was evidence of contemporary activity in the wider area, including six salterns to the east of the CASA that had been designated as scheduled monuments. Post-medieval and 19th century features in the locality included farmsteads, sheepfolds and a duck decoy pond, house and enclosure.

Later interests included a record of a crashed Junkers bomber within the CASA. The PASA contained the site of a crashed Hawker Hurricane aircraft and a number of military structures.

- 8.1.25. The CASA had various heritage assets of unknown date including salt mounds, sheep folds, crop marks, pits and linear features. To date, archaeological investigations had been limited to the eastern part of the CASA for the London Array project. Although the geoarchaeological study [APP-231] modelled the sub-surface of the site as of low sensitivity, the Applicant acknowledged that further buried remains could be encountered during the course of the Proposed Development. The ES [APP-041] assumed that unknown heritage assets existed in the CASA and, in the event of disturbance or destruction, that a major significance of effect would occur.
- 8.1.26. All construction phases of the Proposed Development would require prior archaeological investigation, secured by Requirement 10 of the dDCO [REP17-003]. This provides for a written scheme of investigation to be approved by the relevant planning authority, site investigation as deemed to be required, and any archaeological works or watching brief to be carried out in accordance with an approved scheme. In turn, Requirement 4 of the dDCO provides for the detailed design of each phase of the Development to be approved prior to the commencement of works within that phase. On this basis, the final layout of any phase could, through the process of agreeing details, make provision for the preservation of any archaeological finds which merited preservation *in-situ*. Other finds would be preserved by record. Following the implementation of the agreed scheme of investigation, any predicted effects on the archaeological resource would be reduced to minor and not significant.
- 8.1.27. In terms of historic landscape character, the ES [APP-041] identified the western part of the CASA as drained and irregularly enclosed marshland. Many of the drainage ditch boundaries had been in place since at least 1872.
- 8.1.28. Part of the southern section of the CASA is characterised by small, regular enclosures, some medieval in age, drained and enclosed from marsh with drainage channel boundaries. The straightening of the western boundary and the removal of the eastern boundary may have coincided with a move from pasture land to arable during the twentieth century.
- 8.1.29. The eastern part of the CASA is characterised by rectilinear enclosures bounded by drainage ditches that were largely straightened at the turn of the twentieth century.

Planning Issues

Relevant Representations

- 8.1.30. Heritage, archaeology and historic landscape matters were mentioned in a significant number of Relevant Representations (RRs) (e.g. [RR-321])

and [RR-770]). Many of these relate to insufficient consideration of heritage assets; the potential for valuable archaeological remains to be found at the site; and impacts on the historic environment experienced when walking the Saxon Shore Way.

Local Impact Reports

- 8.1.31. Swale Borough Council, in its Local Impact Report (LIR) [REP1-005], confirmed that there were no direct impacts on either listed buildings or conservation areas. Nonetheless, their setting, of once remote, open marshland, was recognised as an important planning consideration. Swale Borough Council considered that the effect of the Proposed Development on the settings of All Saints Church, Graveney Court, Sparrow Court and the Graveney Church Conservation Area could be seen to amount to 'substantial harm'.
- 8.1.32. In its LIR [REP1-002], Canterbury City Council drew attention to relevant development plan policies which sought to protect the historic environment and heritage assets.
- 8.1.33. Kent County Council, through its LIR [REP1-004], confirmed that the ES and supporting Technical Appendices ([APP-041] and [APP-230] to [APP-233]) provided a comprehensive account of the archaeological and historical background and baseline conditions. The Council agreed that direct impact on archaeology could be mitigated through a programme of agreed archaeological investigations and design measures. Whilst it welcomed the recording and retention of the WWII pillbox, it reserved its position on the proposed use of the building as a bat roost pending further details of how this would be achieved.
- 8.1.34. In terms of the historic landscape, Kent County Council observed that the site would take on an industrial character but noted that the legibility of the former marshland would be helped by the retention of drainage ditches, the sea wall and avoiding built development on the eastern part of the Proposed Development Site. The Council considered that the resultant overall impact would be greater than stated in the ES as the historic landscape was important to the setting of a number of designated heritage assets.

Other representations to the Examination

- 8.1.35. The Statement of Common Ground (SoCG) with Historic England [REP4-038] confirmed that Historic England agreed with the Applicant's assessment that the level of harm to the significance of All Saints Church, Graveney Court and Sparrow Court, Graveney would be less than substantial. It also recorded Historic England's disagreement with the conclusion in the Environmental Statement, which identified a minor magnitude of effect. Historic England regarded the magnitude of effect would be medium in EIA terms and, as a result, the less than substantial harm should be qualified as moderate on a range of low to high.
- 8.1.36. Graveney Rural Environment Action Team (GREAT), in its Heritage Report [REP4-064], considered that the less than substantial harm would

be towards the upper end of the scale. It contended that comparable harm would arise at two further listed buildings, namely The Church of St Thomas the Apostle, Harty and The Shipwright Arms, on the south-western side of Faversham Creek.

- 8.1.37. GREAT ([REP4-063] to [REP4-066] and [REP5-055]) alleged that the Heritage Statement [APP-257] submitted by the Applicant was '*at best wholly incomplete*' and that its approach devalued and minimised the negative effect on all listed and non-designated settings that would have clear visibility of the Proposed Development. Four apparent omissions were highlighted, namely Saint Peter's Church, Church House and Pheasant Farmhouse in Oare, and Oyster Bay House at Standard Quay, Faversham.
- 8.1.38. In response to one of our first round of Written Questions (ExQ1), Kent County Council [REP2-053] confirmed its acceptance of the indirect effects of solar PV panels in what would have been the line of fire of the WWII pillbox as the effects would be reversible on decommissioning, and the building was located on private land and inaccessible to the public. It welcomed the proposals for the recording of the pillbox and its setting, including field of fire, in advance of development. However, in terms of the use of the building as a bat roost, the Council considered some of the related works initially proposed by the Applicant to be unacceptable. This was resolved in an updated outline Landscape and Biodiversity Management Plan (LBMP) [REP6-005] as set out in the SoCG [REP7-029]. The recording of the building will be secured by Requirement 10 of the dDCO and details of minor works and vegetation management will be secured by Requirement 5 of the dDCO [REP17-003].
- 8.1.39. Historic England [REP3-007] was content that the outline Written Scheme of Archaeological Investigation, secured by Requirement 10 of the dDCO [REP17-003], would be appropriate and proportionate in dealing with the potential for non-designated archaeological remains, including the WWII crash site.

ExA Response

All Saints Church, Graveney

- 8.1.40. The heritage value of All Saints Church, Graveney owes much to the special architectural and historic interest of its fabric. In addition, it has association with the former intertidal saltmarsh to the north and a later agricultural landscape. It remains as the focus to the village and has an ongoing visual relationship with the rural landscape and dispersed historic buildings.
- 8.1.41. Although the wider rural landscape, including the Proposed Development Site, is integral to the setting of the church, the Proposed Development would occupy a limited segment of that setting, generally to the north-west of the asset. The nearest solar PV panels would be some 500m to 600m from the church and established planting on the northern and western boundaries of the churchyard would preclude inter-visibility between the church and the solar arrays. However, some glimpsed views

of the Proposed Development would be available from the north-western corner of the churchyard.

8.1.42. We have also considered views from nearby public footpaths (ZR488, ZR489 and ZR490), principally to the west and north-west of the church. From these locations, with a more tangible proximity to the Proposed Development and the resultant visual impacts, we believe that the solar PV panels and related infrastructure would diminish the appreciation of the focus of the church tower in long views and its modest dominance over the pastoral landscape.

8.1.43. Overall, taking account of the scale and location of the proposal, and the consideration of setting as a whole, we conclude that the Proposed Development would seriously erode the rural character of the area and the contribution of setting to the significance of All Saints Church. We agree with the Applicant and Historic England [REP4-038] that the level of harm would be less than substantial. In our view, taking particular account of the overall scale of the Proposed Development, the less than substantial harm should be weighted as moderate in the range of low to high.

Graveney Court and Sparrow Court, Graveney

8.1.44. Graveney Court, situated to the north of the church, has 15th century origins and Georgian remodelling. Its significance, like the church, owes much to the building's special architectural and historic interest. Its slightly elevated position, proximity to the church and similar relationship with the rural landscape are also important factors. We consider that the level of harm would be comparable to that identified for All Saints Church in that the Proposed Development Site is a common factor in the contribution of setting to their significance.

8.1.45. Sparrow Court, of 15th century origin, retains semblance of an isolated farmhouse. Its significance derives from its special architectural interest and historic association with the church and Graveney Court, and also with the surrounding rural landscape. Later scattered dwellings to the south have eroded the sense of isolation, but its historic origins remain legible.

8.1.46. Although the house is some 250m from the southern boundary of the Proposed Development Site and there is intervening vegetation, the widespread loss of fields to solar PV panels would erode the open landscape to the north and its contribution to the significance of Sparrow Court. Again, we believe that this would amount to less than substantial harm, qualified as moderate.

Church of St Thomas The Apostle, Harty

8.1.47. In response to the concerns raised by GREAT [REP4-064] we viewed, on an unaccompanied site inspection [EV-003D], the diminutive and somewhat isolated Church of St Thomas the Apostle, Harty (grade II*).

- 8.1.48. The church is located on the northern side of The Swale, some 2km north of the Proposed Development Site. Its fabric dates from the late 11th or early 12th century. Its interest derives from its composition; proximity to, and elevation above, The Swale; seclusion; and its survival as part of the medieval settlement of Harty.
- 8.1.49. The church in its setting is notable in views from the Saxon Shore Way, and the churchyard affords extensive views across The Swale and over the Proposed Development Site and beyond [REP4-029]. Although the expansive landscape is important to the appreciation and understanding of the church, the Proposed Development Site is a relatively small, but central, element of much more extensive surroundings [APP-077].
- 8.1.50. In addition, the Applicant has demonstrated [REP4-029] that the existing sea wall would substantially screen the solar PV panels. We believe, as a consequence of this, and the distance of the Proposed Development Site from the asset, that the panels would merge as an indistinguishable thin band above the coastal flood defence, and the higher elements of the Proposed Development would be seen against the backdrop of the existing Cleve Hill substation as a very small part of the overall view.
- 8.1.51. Considered as a whole, we consider that the harm to significance arising from impacts on the setting of the church would amount to less than substantial harm towards the lower end of the scale.

The Shipwright Arms, Faversham Creek

- 8.1.52. We also viewed the locality of The Shipwright Arms [EV-003B]. The building is modest in character and much of its interest flows from its remote marshland location and association with Faversham and Oare Creeks. The public house and its garden nestle below the sea wall and tangible association with the Proposed Development Site is only evident from the elevated Saxon Shore Way. The coastal flood defence on the north-eastern side of Faversham Creek [REP4-029] would offer substantial screening of the solar PV panels, and the impact of the Proposed Development, as a whole, on the significance of the heritage asset would be insufficient to amount to harm.

Other Listed Buildings

- 8.1.53. The ES contains maps and a comprehensive list of heritage assets within 5km of the Proposed Development Site. Detailed consideration was restricted to those within 1km where there was potential for significant effects and to those beyond that range in consultation with Kent County Council and Historic England [REP4-038]. We are satisfied with the integrity of the Applicant's approach.
- 8.1.54. From publicly accessible land on an unaccompanied site inspection [EV-003E], we viewed the four listed buildings at Oare and Standard Creek that GREAT [REP4-064] claimed to be 'omissions' from the Applicant's assessment. We recognise that extensive outward views do not necessarily coincide with the surroundings in which a heritage asset is experienced. Although such views can be important, the Proposed

Development Site represents a small component of a much more extensive vista with various human influences.

- 8.1.55. Overall, we are satisfied that the impact of the Proposed Development would be sufficiently minor so as not to harm the significance of these heritage assets. This serves to reinforce our view that the assessment undertaken by the Applicant was proportionate, transparent and verifiable.

Graveney Church Conservation Area

- 8.1.56. Graveney Church Conservation Area contains a small scatter of buildings which, despite more modern development to the north and south within the designated area, can be clearly distinguished by their age and function as typifying an isolated, small, scattered hamlet on the edge of the marshes. All Saints Church and Graveney Court provide the predominant focus in terms of authentic historic building survival.
- 8.1.57. Although the Proposed Development would have an adverse impact on the significance of these buildings, as described above, we consider that the effect on the conservation area as a whole would be more benign. In our view this would amount to less than substantial harm towards the lower end of the scale.

Other heritage assets

- 8.1.58. In terms of other conservation areas in the wider locality, Canterbury City Council [REP5-014] has confirmed that the Proposed Development would not result in harm to the character and appearance of the South Whitstable and Whitstable Town Conservation Areas or the historic setting of Whitstable. We are also satisfied, with particular reference to the Graveney Bridge, Goodnestone and Faversham Conservation Areas, that the character and appearance of other designated areas would be preserved.
- 8.1.59. As to other designated heritage assets, including the scheduled monument salterns that stand apart from the Proposed Development Site, we are content that the Proposed Development would not result in any loss of significance.
- 8.1.60. The WWII pillbox within the Proposed Development Site, an undesignated heritage asset, would be preserved *in-situ* but would experience a substantial loss of significance as a result of development within its setting. However, the building itself would be conserved and put to new use as a bat roost, with appropriate safeguards through the agreed outline LBMP [REP6-005], thus safeguarding its future preservation. The recording of the building, minor works and vegetation management would be secured in the Recommended DCO (Requirements 10 and 5 respectively). The overall level of harm would be moderate.

Archaeological interest

- 8.1.61. Having considered the potential for unknown archaeological interest to be revealed by the Proposed Development, and with particular note of IPs'

references to the aircraft crash site and the Nagden Bump [REP4-025], we are satisfied that a scheme for further investigation, secured by Requirement 10 of the Recommended DCO, would provide appropriate safeguards and ensure that any potentially significant effects would be comprehensively mitigated.

Historic landscape character

- 8.1.62. We saw from our unaccompanied site inspection [EV-002] that a significant part of the Proposed Development Site has the distinct characteristics of drained coastal marshland behind coastal flood defences. This character type is less distinct, locally, particularly to the north-east of Cleve Hill, which has a more settled character.
- 8.1.63. We accept that the Proposed Development would comprehensively dilute the quintessence of the grazing marshes by adding solar PV panels, energy storage and related infrastructure, resulting in significant harm to historic landscape character. However, the retention of the drainage ditches, and the separation between these boundaries and the arrays, would retain the historic legibility of the landscape. Moreover, the absence of built development on the smaller fields to the north-east of Cleve Hill would also reinforce the contrast between historic landscape types. Overall, we consider that the impact on historic landscape is a factor of moderate weight.

Conclusions on Cultural Heritage

- 8.1.64. Taking all relevant documents and policies into account, with the requirements of Regulation 3(3) of the Infrastructure Planning (Decision) Regulations 2010, we conclude:
- the Proposed Development would not preserve those elements of setting which make a positive contribution to the significance of the following designated heritage assets: All Saints Church, Graveney; Graveney Court and Sparrow Court, Graveney; The Church of St Thomas The Apostle, Harty; and the Graveney Church Conservation Area. The degree of harm, both individually and cumulatively, would be less than substantial;
 - there would be no harm, either individually or cumulatively, to the significance of other designated heritage assets;
 - the WWII pillbox, a non-designated heritage asset within the Proposed Development Site, would experience a substantial loss of significance as a result of development within its setting; but some benefit would arise from its use as a bat roost with ongoing management to secure the preservation of the building resulting in moderate harm;
 - potential archaeological assets within the Proposed Development Site would be investigated and recorded; and safeguarded through *in-situ* preservation where justified; and
 - the Proposed Development would cause harm to historic landscape character to which we attach moderate weight.

- 8.1.65. Overall, in accordance with NPS EN-1 the NPPF and relevant development plan policies, we confirm that great weight is to be given to the conservation of historic assets and any harm to, or loss of, significance of a designated heritage asset should require clear and convincing justification. The harm that we have identified falls to be weighed against the wider benefits of the Proposed Development which we undertake in Chapter 10 of our Report.

8.2. AGRICULTURAL LAND

Introduction

- 8.2.1. The principal issue that arose during the Examination in relation to land-use, agriculture and soils was the Agricultural Land Classification (ALC) assessment. Other aspects of land use are included in section 8.5 of this Report.

Policy Considerations

- 8.2.2. At 5.10.8, NPS EN-1 states that applicants should seek to minimise impacts on the best and most versatile agricultural land (defined as land in ALC Grades 1, 2 and 3a) and preferably use land in areas of poorer quality (ALC Grades 3b, 4 and 5) except where this would be inconsistent with other sustainability considerations. It goes on to suggest that schemes should not be sited in areas of the best and most versatile agricultural land without justification, but that little weight should be given to the loss of poorer quality agricultural land.
- 8.2.3. Chapter 15 of the NPPF contains overarching policies for conserving and enhancing the natural environment, including an indication that planning decisions should contribute to the protection of soils and respect the economic benefits of the best and most versatile agricultural land.
- 8.2.4. Policy DM 31 (Agricultural Land) of Bearing Fruits 2031: The Swale Borough Local Plan, adopted July 2017, seeks to prevent development on agricultural land unless there is an overriding need that cannot be met on land within built-up area boundaries: it places special restrictions on better quality land, including that in Grade 3a.

The Applicant's Case

- 8.2.5. The Applicant's case was set out in ES Chapter 13, Socioeconomics, Tourism, Recreation and Land Use [APP-043] and its accompanying Appendix *Soils and Agricultural Use and Quality of Land at Cleve Hill Farm, Faversham, Kent* by Land Research Associates [APP-244].
- 8.2.6. These Application documents explained that the Proposed Development Site was currently arable land used on rotation for spring and winter cereals and oilseed, and that it was not under any agri-environment schemes.
- 8.2.7. The ES estimated that the Proposed Development would affect approximately 370ha of arable land, comprising approximately 2ha of

ALC Grade 2, 9ha of ALC Grade 3a, and 360ha of ALC Grade 3b. It concluded that this was not significant, given that more than 97% of the loss was of ALC Grade 3b, of low value.

- 8.2.8. British Geological Society (BGS) maps record the geology as London Clays overlain by clayey alluvium (except the higher ground at Cleve Hill). The National Soil Map indicates Wallasea Association soils, described as mainly clayey soils with slowly permeable subsoil, formed in coastal alluvium.
- 8.2.9. The Appendix to the ES [APP-244] set out the findings of a soil resource and agricultural quality survey carried out in 2017. It uses the standard MAFF ALC system (MAFF (1988): *Agricultural Land Classification for England and Wales; Guidelines and Criteria for Grading the Quality of Agricultural Land*) (the 'MAFF ALC guidelines'). This categorises agricultural soils into 5 Grades, with Grade 3 subdivided into Grades 3a and 3b. Grades 1, 2 and 3a are considered the 'best and most versatile' soils, as referred to in national planning policy.
- 8.2.10. The survey found the Proposed Development Site to be dominated by clayey soils with impeded subsoil drainage and evidence of seasonal waterlogging to shallow depth. The soils were assessed as being of soil wetness class III. This soil wetness limits agricultural quality to ALC Grade 3b. The topsoil was said to be difficult to work when wet, and winter and spring wetness largely restricted arable use to autumn-sown crops.

Planning Issues

Relevant Representations

- 8.2.11. Agricultural production and the loss of agricultural land was mentioned in a number of RRs, including those of CPRE Kent [RR-751] and the Swale Green Party [RR-711].

Local Impact Reports

- 8.2.12. In its LIR [REP1-005], Swale Borough Council briefly developed the matter of land use and agriculture in relation to adopted local plan policy DM 31, Agricultural Land. The Council acknowledged that more than 90% of the land intended for the Proposed Development was ALC Grade 3b and that the impact on agricultural land was limited. It went on to question, nevertheless, whether productive agricultural land should be used for solar power generation, as opposed to the use of rooftops and previously developed land.

Other representations to the Examination

- 8.2.13. One of the IPs, Dr Erasin, questioned the quality of the ALC survey and report through the course of the Examination. In an oral representation to the first OFH, and in his Written Representations (WRs) [REP2-060] and [REP2-114], Dr Erasin alleged that the report presented an incomplete and incorrect interpretation of various sections of the MAFF

ALC guidelines, which he appended to his WR [REP2-060]. Amongst the perceived shortcomings that he identified were:

- field survey undertaken at an unsuitable period of year leading to a 'predetermined' outcome;
- over-reliance on a single survey to derive the wetness class specification of the topsoil and subsoils and thus to deduce wetness class III and ALC Grade 3b;
- insufficient quantitative data provided to justify the classification as Grade 3b;
- some field data missing; and
- failure of soil samples to reach 120cm target depth.

8.2.14. He set out his own interpretation of the correct approach to assessment under the MAFF ALC guidelines, particularly in respect of the determination of the soil's wetness class, using local meteorological data that he was unable to verify. This led him to the following conclusions:

- for wetness class III soils with more than 1% calcium carbonate (CaCO₃) and between 18% and 50% clay in the top 25 cm, the ALC Grade should increase a step: on this basis, he suggested 34 ALC Grade 3a sample locations were incorrectly assessed as 3b;
- it was more likely that the duration of waterlogging put the soils into wetness class II;
- these two issues combined meant these 34 sample locations should have been ALC Grade 2;
- a further 37 sample locations should have been upgraded from ALC Grade 3b to 3a on the basis of an incorrect allocation of wetness class III when it should have been II;
- a further 54 sample locations should have been reallocated from ALC Grade 3b to 3a on the basis of a soil texture description that was silty rather than clayey; and
- his evaluation concluded overall that 'over 75% of the land at Cleve Hill Farm can be graded as Grade 2 (very good agricultural land) and Subgrade 3a (good agricultural land) in accordance with MAFF 1988 guidelines.'

8.2.15. In its response to WRs that were received at Deadline 2 [APP3-020], the Applicant said:

'The specific WR provided by Dr Erasin in relation to Agricultural Land Classification set out his view that the report provided with the Application [APP-244] was considered to be inaccurate. The Applicant stands by the conclusions of the report which are supported by the report's authors, Land Research Associates, who have confirmed that the report was undertaken in strict accordance with the MAFF 1988 Revised guidelines and criteria for grading the quality of agricultural land. A more detailed response to the specific points raised by Dr Erasin will be provided by Deadline 4.'

8.2.16. At Deadline 4, in its response to the Deadline 3 submissions [REP4-041], the Applicant confirmed again that its report has been undertaken in strict accordance with the MAFF ALC guidelines. The Applicant

acknowledged that some data had been inadvertently omitted from the report, and this was provided [REP4-034]. It concluded that its inclusion made no difference to the ALC grading. The response addressed the range of shortcomings identified by Dr Erasin, and in particular the following principal issues.

- 8.2.17. The Applicant advised that Land Research Associates carry out such surveys all year round because the timing of an ALC survey has no bearing on the grading. This is because wetness class is judged only on:
- site-specific duration of field capacity days derived from the long-term averages in the Meteorological Office 1989 25-year Climatological Dataset for Agricultural Land Classification (in accordance with the MAFF ALC guidelines); and
 - soil morphological evidence (i.e. presence of gley phenomena which indicate the depth of seasonal waterlogging) and depth to slowly permeable layers (i.e. permanent features of the soil that do not change).
- 8.2.18. It was confirmed that the report utilised 25-year climatic averages interpolated for the Proposed Development Site, derived from the Meteorological Office 1989 Climatological Dataset for Agricultural Land Classification, strictly in accordance with the MAFF ALC guidelines. The Applicant noted that the use of short-term weather station data did not accord with the MAFF ALC guidelines and was not considered appropriate.
- 8.2.19. In relation to the matter of upgrading soils with more than 1% CaCO₃ and between 18% and 50% clay in the top 25 cm, the Applicant noted that the average of the samples that were analysed in the laboratory exceeded 50%, supporting the assertion that these soils were heavy and difficult to work.
- 8.2.20. Addressing Dr Erasin's concerns over the failure to take soil samples down to 120cm depth, the Applicant pointed out that 120cm was a 'target' depth. The Applicant suggested that the wetness limitations were evident within 80 cm, that the majority of augers go down to 100cm, and that it was rare to extend boreholes to a full 120 cm. The Applicant concluded that this issue had no material bearing on the grading of the majority of the land as ALC Grade 3b due to wetness limitations, as *'a full and complete assessment with regard to ALC grading can be made on these augers.'*
- 8.2.21. By way of geographical context, the Applicant provided information from published 1990s ALC reports by MAFF surveyors on the same soils and geology within 5km of the site. One, of land over alluvial clays immediately to the west of the Proposed Development Site at Ham Marshes (Natural England reference R095\98), found 98% of the land to have clay soils limited by wetness to ALC Grade 4; two, on London Clay at Waterham to the east (Natural England references R040\90 and R142\96), found 100% of the land to have clay soils limited by wetness to ALC Grade 3b.

- 8.2.22. The Applicant's response concluded that the land at the Proposed Development Site had been correctly graded in accordance with the MAFF ALC guidelines by three experienced surveyors. It confirmed that the site had heavy clay soils with impeded drainage and that the resultant wetness predominantly limited land to ALC Grade 3b.
- 8.2.23. Dr Erasin made a subsequent WR to comment on the Applicant's response [REP5-038]. He remained of the opinion that the ALC report was flawed and provided a step-by-step guide to the way he believed the assessment should have been undertaken. However, having undertaken a reassessment, he reached a revised conclusion that approximately 41% of the land should have been ALC Grade 3a due to the presence of calcareous soils. He added this to the 1.9ha of ALC Grade 2 land and 8.8ha of ALC Grade 3a identified in the ES to deduce a total that he believed should be categorised as ALC Grades 2 and 3a of 164.7ha. Therefore, his earlier assertion that 'over 75%' of the land at Cleve Hill should be ALC Grade 2 or 3a reduced to 'around 45.8%'.
- 8.2.24. At Deadline 6, in response to Deadline 5 submissions [REP6-015], the Applicant commented on Dr Erasin's further representation. This repeated the previous rebuttal [REP4-04] and suggested that Dr Erasin '*demonstrates an inconsistent and speculative approach to the criticisms made of the Applicant's Agricultural Land Classification*'. The Applicant remained confident that the ALC report authored by Land Research Associates provided an accurate assessment of the ALC of the Proposed Development Site.

ExA Response

- 8.2.25. We were shown the Proposed Development Site on our Accompanied Site Inspection (ASI) [EV-010] and walked its full boundary on one of our USIs [EV-002]. We saw the crop growing at the time, that being field beans (broad beans) that appeared to be maturing at a general height across the arable fields of the Proposed Development Site of some 2m.
- 8.2.26. We have considered each of the areas of on-going disagreement between the Applicant and Dr Erasin in relation to the ALC assessment report in detail. We believe that the fundamental matters with the potential to have a material effect on the outcome of the ALC assessment rest on the interpretation of two main areas of the MAFF ALC guidelines: firstly, the climatic data used to determine soil wetness; and, secondly, the influence of CaCO₃ in the soil on its wetness characteristics.
- 8.2.27. In relation to climatic data, we note from the MAFF ALC guidelines that the main parameters used in the assessment of limitations on agricultural land quality are average annual rainfall (AAR) and accumulated temperature. In terms of soil wetness, which seems to be the basis of much of the dispute here, the use of the agroclimatic datasets published by the Meteorological Office and referred to at Appendix 1 of the MAFF ALC guidelines is advocated. (These were published subsequently by the Meteorological Office as *Climatological Data for Agricultural Land Classification*, MAFF, January 1989.) The key data sets used in a soil

wetness assessment should be AAR between 1941 and 1970, and Median Duration of Field Capacity Days (FCD) between 1941 and 1970. The report [APP-244] notes that these were used for the assessment, and this was later confirmed by the Applicant [REP4-041].

- 8.2.28. As the recommended long-term, average data sets have been used, we believe that Dr Erasin's criticism that the report was reliant for its wetness class specification on a single survey undertaken at a 'biased' time of year was a misunderstanding of the approach that should be – and was - taken.
- 8.2.29. In terms of CaCO₃, we note that the footnote to Table 6 of the MAFF ALC guidelines states: *'For naturally calcareous soils with more than 1% CaCO₃ and between 18% and 50% clay in the top 25 cm, the grade, where different from that of other soils, is shown in brackets'*, with a reference to page 16 of the guidance. Page 16 states by way of explanation, *'Calcareous clay soils are generally better structured than non-calcareous clays and are consequently better drained and easier to cultivate.'* This caveat would allow the 'upgrading' of a soil sample to the next highest ALC Grade if it satisfies both criteria.
- 8.2.30. Only three of the samples were submitted for full laboratory textural analysis. We agree with Dr Erasin's observation that the CaCO₃ content in each case exceeded 1% but note that the average clay content across the samples was in excess of 50% (albeit marginally), as noted by the Applicant [REP4-041]. We also note that the majority of the textural descriptions recorded by the professionals in the field were of clay or a clay-based soil. We are also persuaded that the soils are subject to seasonal waterlogging by the evidence of moderate to heavy mottling or a gleyed horizon (blue-grey colour mottling, characteristic of intermittently waterlogged soil) in the vast majority of samples.
- 8.2.31. As such, we do not believe that the samples identified by Dr Erasin should be upgraded from ALC Grade 3b to ALC Grade 3a as he suggests.
- 8.2.32. On both of these counts, we therefore believe that the ALC assessment presented to the Examination by the Applicant is reliable. We reach similar conclusions on the other relevant and important ALC matters that were contended. This conclusion is supported by the contextual evidence presented in [REP-041] in relation to published MAFF ALC surveys on the same soils and geology within 5km of the site.

Conclusions on Agricultural Land

- 8.2.33. Taking all relevant documents and policies into account, we conclude that:
- the only material point of contention in relation to agricultural land during the Examination was the ALC grading of the Proposed Development Site;
 - after a rigorous evaluation of the cases put forward by the Applicant and an IP, we are satisfied that the Applicant's ALC report, as updated during the Examination, is a robust assessment of the soils and ALC

at the Proposed Development Site, and that the vast majority falls into ALC Grade 3b;

- as such, the Proposed Development accords with relevant policy in NPS EN-1, the NPPF and the local plan as it avoids significant impacts on the best and most versatile agricultural land; and
- as per the test in NPS EN-1, we give very little weight to the loss of poorer quality agricultural land of ALC Grade 3b and find this to be neutral in the planning balance.

8.3. TRAFFIC AND TRANSPORT

Introduction

- 8.3.1. This section addresses the access, transport and traffic effects of the Proposed Development.

Policy Considerations

National Policy Statement for Energy

- 8.3.2. Access and transport considerations are set out in the Overarching National Policy Statement for Energy (NPS EN-1) at paragraphs 5.13.1 to 5.13.12. Mitigation is considered at paragraphs 5.13.8 to 5.13.12.

- 8.3.3. The consideration and mitigation of transport impacts is noted as an essential part of Government's wider policy objectives for sustainable development. Transport-related activities can cause economic, social and environmental effects, including increased noise and emissions from road transport. As far as possible, adequate mitigation measures should be proposed to reduce any impacts to acceptable levels.

- 8.3.4. In situations where there is likely to be a substantial generation of HGV traffic, paragraph 5.13.11 suggests that DCO Requirements to achieve one or more of the following may be necessary:

- control numbers of HGV movements to and from the site in a specified period during its construction and possibly on the routing of such movements;
- make sufficient provision for HGV parking, either on the site or at dedicated facilities elsewhere, to avoid 'overspill' parking on public roads, prolonged queuing on approach roads and uncontrolled on-street HGV parking in normal operating conditions; and
- ensure satisfactory arrangements for reasonably foreseeable abnormal disruption, in consultation with network providers and the responsible police force.

National Planning Policy Framework (NPPF)

- 8.3.5. Paragraph 102 (a) of Chapter 9 of the NPPF notes that:

'Transport issues should be considered from the earliest stages of plan-making and development proposals, so that the potential impacts of development on transport networks can be addressed.'

- 8.3.6. In terms of the determination of applications, paragraph 109 states:

'Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe'.

The Development Plan

- 8.3.7. Given its relevance and importance, the following development plan policies are considered particularly pertinent.
- 8.3.8. Bearing Fruits 2031: The Swale Borough Local Plan, adopted July 2017 (The Swale Borough Local Plan);
- Policy CP 2 – Sustainable Transport; and
 - Policy DM 26 – Rural Lanes.
- 8.3.9. In summary, these policies seek to ensure that proposals provide integrated walking and cycling routes to link existing and new communities, maintain and improve the highway network at key points and contribute to transport network improvements if capacity is exceeded or safety standards are unacceptably compromised. Policy DM 26 requires that planning permission is not granted where the proposal or the associated traffic levels would result in significant harm to the character of rural lanes.
- 8.3.10. Canterbury District Local Plan, adopted July 2017:
- Policy T1 – Transport Strategy; and
 - Policy T16 – Rural Lanes.
- 8.3.11. In summary, these policies confirm that the environmental impact of traffic will be a consideration in determining proposals. Furthermore, rural lanes considered to have landscape amenity, nature conservation, historic or archaeological importance will be protected from proposals which would damage the existing character.

The Applicant's Case

- 8.3.12. The principal Application documents relating to access and traffic were:
- [APP-044] Environmental Statement – Traffic and Access Chapter;
 - [APP-061] Environmental Statement – Traffic Figures;
 - [APP-205] Environmental Statement – Outline Construction and Environmental Management Plan;
 - [APP-206] Environmental Statement – Outline Decommissioning and Restoration Plan; and
 - [APP-245] Environmental Statement – Construction Traffic Management Plan.
- 8.3.13. Documents subsequently submitted into the Examination by the Applicant on this topic included:
- [REP3-024] Deadline 3 submission – Raw Traffic Data;
 - [REP4-037] Deadline 4 submission – Statement of Common Ground between the Applicant and Swale Borough Council;

- [REP5-014] Deadline 5 submission – Statement of Common Ground between the Applicant and Canterbury City Council;
- [REP7-029] Deadline 7 submission - Statement of Common Ground between the Applicant and Kent County Council; and
- [REP7-030] Deadline 7 submission – Response to the Rule 17 letter.

8.3.14. The outline Construction Traffic Management Plan (CTMP), outline Construction and Environmental Plan (CEMP) and outline Decommissioning and Restoration Plan (DRP) were updated and submitted at several of the Examination Deadlines. This culminated in the final versions being produced at Deadline 7: outline CTMP [REP7-021]; outline CEMP [REP7-015]; and outline DRP [REP7-017].

Methodology

8.3.15. The scope of the transport and highways assessment was agreed through consultation as set out in the Applicant’s EIA Scoping Report [APP-198] and the Scoping Opinion from PINS [APP-199], as summarised in the ES [APP-044]. The Scoping Opinion confirmed that significant operational effects were unlikely, so a detailed assessment was not required. The ES did, nevertheless, provide details of the anticipated traffic movements during the operational phase.

8.3.16. The assessment methodology was said to follow the standards set out by the Institute of Environmental Assessment (IEA) in its *Guidelines for Environmental Assessment of Road Traffic* (1993).

8.3.17. In accordance with the IEA Guidelines, the transport-related environmental effects included delay, road safety, intimidation and fear, severance and pedestrian amenity.

8.3.18. The Applicant suggested in the ES that, as a rule, effects assessed as being moderate, large or very large were considered to be significant in terms of the EIA Regulations, although this could be modified through professional judgement.

8.3.19. The assessment examined the feasibility of modal options to move freight, existing highway infrastructure surrounding the site, and potential routing options. A review of personal accident data, local cycle and pedestrian routes and the identification of local, sensitive receptors was included.

8.3.20. Mitigation was introduced in the outline CTMP [REP7-021], which provided the methodology for managing the significant effects of additional construction traffic.

Baseline conditions

8.3.21. The ES set out a detailed description of both the strategic and local road network in the context of the Proposed Development at section 14.3 [APP-044]. It further described traffic flows, level of agricultural traffic, pedestrian and cycle use, and public transport provision. Personal injury accident data for the area around the Proposed Development Site was examined.

- 8.3.22. Receptors in the vicinity of the Proposed Development Site that were likely to be sensitive to traffic were identified at section 14.3.9 of the ES.

Potential effects

Construction phase

- 8.3.23. Sections 14.4.1 and 14.4.2 of the ES [APP-044] summarised the assessment of construction traffic effects on receptors, as tabulated in Table 14.13. Several potentially significant effects were predicted in the absence of additional mitigation.

Operational phase

- 8.3.24. Section 14.4.3 of the ES confirmed that, during routine operation, the Proposed Development would require three members of maintenance staff to attend the site each day. This would result in six additional vehicle trips per day.
- 8.3.25. The Applicant contended that such an increase would have a negligible effect on all receptors.

Decommissioning phase

- 8.3.26. Decommissioning effects were predicted to be the same or to have a lesser significance than the construction effects. In addition to the submitted outline Decommissioning and Restoration Plan (DRP) [REP7-018], the Applicant anticipated that a Decommissioning Traffic Management Plan would also be drafted and approved by the relevant local authority in advance of decommissioning works. The necessary DRP measures would need to be secured through the final version of that Management Plan and Requirement 17 of the Recommended DCO.

Mitigation measures

- 8.3.27. At section 14.5, the ES [APP-044] stated that the outline CTMP [REP7-021] would be developed to provide detail of the measures that would be used to mitigate the potentially significant construction traffic effects.
- 8.3.28. The necessary CTMP measures would need to be secured through the final version of that Management Plan and the discharge by the relevant planning authority in consultation with the relevant highway authority of Requirement 12 in the Recommended DCO.

Applicant's summary of predicted effects

- 8.3.29. A tabular summary of the predicted residual effects of the Proposed Development was provided in Table 14.15 of the ES [APP-044]. The Applicant concluded that, following the mitigation discussed in the outline CTMP [REP7-21], apart from cyclist amenity on Seasalter Road/ National Cycle Network 1 (NCN 1), all impacts would be reduced to slight at worst.
- 8.3.30. A moderate adverse, but temporary, effect would remain in relation to the pleasantness of cyclists' journeys along part of Seasalter Road/ NCN

1. The Applicant contended that pleasantness is a subjective experience, wholly dependent on the user, and that as detailed in section 14.6 of the ES [APP-044], most of the construction vehicle movements would occur between 0930 and 1530 Monday to Friday, thereby avoiding the general tendency for peak recreational cycling at weekends. As such, the ES suggested that, in this case, the moderate adverse effect would not be significant.

8.3.31. The ES concluded that, following the implementation of the measures in the CTMP [REP7-021], no significant residual effects would remain.

Planning Issues

Relevant Representations

8.3.32. Access and transport were mentioned in a number of RRs. Many of these relate to:

- traffic impacts on Graveney village and the surrounding areas during the construction phase (e.g. [RR-423] and [RR-503]);
- concern as to whether the existing road network in Graveney could accommodate the level of construction traffic (e.g. [RR-008] and [RR-086]);
- impact of construction traffic on the road surfaces (e.g. [RR-187]);
- noise and vibration from construction traffic (e.g. [RR-233]);
- traffic-related safety issues (e.g. [RR-058] and [RR-488]);
- traffic-related air quality issues (e.g. [RR-321] and [RR-396]); and
- the effect on sensitive receptors such as Graveney Primary School (e.g. [RR-102] and [RR-299]).

Local Impact Reports

8.3.33. In its LIR [REP1-005], Swale Borough Council confirmed that once construction was complete, the proposal would not result in significant ongoing traffic generation. However, because of the proposed level of construction traffic, residents would experience traffic for all but a very few hours of each weekday and for a large part of each weekend.

8.3.34. In addition, it noted that the construction traffic route was popular with cyclists, and the amount of construction traffic proposed would result in harm in relation to road safety and amenity considerations. As both Head Hill Road and Seasalter Road were defined as rural lanes, compliance with policy DM 26 of The Swale Borough Local Plan was not anticipated.

8.3.35. In its LIR [REP1-002], Canterbury City Council anticipated no adverse effect on the highways network within the district.

8.3.36. Kent County Council, through its LIR [REP1-004], stated that during operation, few vehicle movements would be generated on the local highway network. The Council confirmed that the appropriate impacts from HGV activity generated by the construction and decommissioning phases had been identified in the ES Chapter [APP-044]. In addition, the Council was satisfied that the construction and decommissioning traffic

impacts could be appropriately mitigated through the implementation of the outline CTMP [REP7-021].

Other representations to the Examination

- 8.3.37. The Statements of Common Ground (SoCGs) with Canterbury City Council [REP5-014] and Swale Borough Council [REP4-037] confirmed that highway-related matters had been deferred to Kent County Council.
- 8.3.38. Matters relating to access and transport were attached to the Kent County Council SoCG [REP7-029] as Appendix A2. The SoCG confirmed agreement on all access and transport issues, including the proposed mitigation measures detailed in the outline CTMP [REP7-021].

Concerns over traffic survey

- 8.3.39. An IP, Mr King, [REP3-087] noted disparities between the Applicant's traffic survey data and the information included in Table 14.6 of the ES Chapter [APP-044]. He contended that the number of HGVs had been exaggerated in the assessment. The Applicant provided a response to this query in its answers to ExQ2 [REP4-020] and was confident that the data provided in Table 14.6 formed a robust basis for assessment.

Suitability of village roads and impact on local businesses

- 8.3.40. Several IPs expressed concern about the suitability of local roads along the construction traffic route to accommodate the volume of proposed construction traffic [REP2-094], [REP2-102], [REP2-112], [REP3-051], [REP3-083] and [REP7-104]. Concern regarding the level of forward visibility was also raised [REP4-071] and [REP6-032].
- 8.3.41. We were told that parts of the construction traffic route were used by local businesses, some utilising large vehicles. Residents also reported that drivers often needed to pull onto verges or private land to let tractors or removal vehicles pass where the road was not wide enough to accommodate both vehicles. Concern was expressed that the increased numbers of HGVs using the route would lead to local businesses and residents experiencing more inconvenience and further delays when attempting to pass a large oncoming vehicle or being caught behind two large vehicles, travelling in opposite directions, trying to pass each other [REP3-087], [REP7-078] and [REP7-080].
- 8.3.42. At Open Floor Hearing 1 (OFH1) [EV-012] and in a written submission [REP3-073], GREAT suggested that the 'Sensitive Receptor' map produced by the Applicant [APP-061] failed to identify all local businesses and sensitive receptors along the construction traffic route.
- 8.3.43. In response, the Applicant [REP3-012] acknowledged the presence of businesses and residential properties along the construction traffic route and indicated that these had been identified in Chapter 14 of the ES at section 14.3.9 [APP-044].

Safety

- 8.3.44. Safety issues in relation to construction traffic were raised by several IPs. Concern was expressed about the increased volume of large vehicles, lack of footpaths on parts of the construction traffic route and lack of space for walkers to move out of the way of the traffic. This was raised as a concern for local schoolchildren and people walking their dogs [REP2-094] and [REP2-112].

Cycling

- 8.3.45. IPs also raised safety issues regarding cyclists as NCN 1 runs along part of the construction traffic route [REP2-058], [REP2-059], [REP2-094] and [REP7-080].

Outline Construction Traffic Management Plan

- 8.3.46. At ISH6 [EV-023], and in a written submission [REP5-045], Graveney with Goodnestone Parish Council raised several points regarding the content of the outline CTMP [REP7-021]. It concluded that the document was:

'wholly inadequate in terms of offering a cohesive and effective document to deal with the question of construction traffic Safety for pedestrians, cyclists and other motorists would be at risk and prompt access for emergency vehicles would undoubtedly be compromised'.

- 8.3.47. Mr King [REP4-071] also made several challenges to the content of the outline CTMP. In particular, he questioned the accuracy of the road width measurements on Head Hill Road and Seasalter Road. He undertook his own measurements from the junction between Whitstable Road and Head Hill Road to the entrance of the existing London Array substation. He reported that, from the 25 measurements taken, the minimum width was 4.2m and the maximum 6.1m. This conflicted with the Applicant's measurements of between 4.5m and 7.5m.
- 8.3.48. As such, Mr King contended that the method of assessment undertaken by the Applicant was invalid and that local buses would only be able to pass an HGV in a maximum of 3 places along this stretch of the construction traffic route.

ExA Response

Procedure and approach

- 8.3.49. We have taken careful account of the views of the highway authority, local authorities and IPs regarding the approach taken by the Applicant in relation to access and transport issues.
- 8.3.50. Noting the response by the Applicant [REP7-027] to Mr King's representation regarding the outline CTMP [REP6-032], we are content that the Applicant's approach to the surveys and assessment was satisfactory as a standard approach was adopted which complied with relevant guidance. In addition, we note that in Appendix A2 of the Kent

County Council SoCG [REP7-029], the Council endorsed the approach adopted by the Applicant. Accordingly, by the end of the Examination, we were of the opinion that the evidence before us was sufficiently robust to provide meaningful outputs that could be relied on. We do not believe that any of the detailed concerns about the method of assessment make a material difference to the outcome or conclusions.

Outline Construction Traffic Management Plan

- 8.3.51. The outline CTMP [REP7-021] submitted with the Application included a Travel Planning Statement, Traffic Incident Management Plan and Public Right of Way Management Plan. The Applicant added detail incrementally at various Examination Deadlines.

HGVs

- 8.3.52. We are content with the approach to mitigation proposed in the outline CTMP [REP7-021]. The principal measures include a routing strategy to be used by both LGVs and HGVs, and the identification of roads and areas that could not be used by construction traffic without the prior agreement of the relevant local authority. Timing restrictions for the movement of HGVs on the local road network would also be in place. A Delivery Management System would ensure that HGV deliveries to the Proposed Development Site would be spread across the day. The measures in the outline CTMP would be secured by Requirement 12 of the dDCO.
- 8.3.53. We also note the additional measures included in the outline CTMP to further assist in reducing any congestion or delay. HGVs would be requested to park in the laybys and service areas located on the A2, A299 and M2 until the timing restriction on the local network had passed. This would ensure that HGVs would not be waiting in inconvenient locations, causing local congestion. Inbound HGVs would also be required to park in laybys closer to the Proposed Development Site and call ahead to avoid meeting any outbound vehicles on Head Hill Road and Seasalter Road. HGVs would also be required to give way to any oncoming vehicle to reduce delays for local motorists. All drivers of vehicles to the Proposed Development Site would be briefed in detail regarding the content of the outline CTMP and how to fulfil the required traffic management measures.
- 8.3.54. We accept that these measures would reduce congestion on the local road network surrounding the site and limit the likelihood of delay to motorists.
- 8.3.55. In order to avoid the start and finish times of pupils at Graveney Primary School, HGVs would not be permitted to leave or deliver to the site between 0830 to 0930 or 1500 to 1600. Most HGV movements are expected between 0930 and 1530.
- 8.3.56. Speed restrictions would be in place on Head Hill Road and Seasalter Road for all construction traffic. The speed of construction vehicles would be restricted to 20mph at certain points along these roads, as illustrated

in Appendix E of the outline CTMP [REP7-021]. The reduction of speed along these roads would limit the impact and likelihood of accidents, alongside other benefits such as a reduction in traffic noise, pollution and reduced fuel consumption. The measures in the outline CTMP would be secured by Requirement 12 of the dDCO.

8.3.57. Furthermore, table 12.23 of the ES [APP-042] predicted that receptors on Head Hill Road (both north and south) would experience a change in noise of less than 1dB as a result of the construction traffic. For Seasalter Road, the change would be less than 2dB. These changes are considered to be below the general level of perceptibility.

8.3.58. As with other construction activities, such effects would be for a temporary duration during the construction phase. As the levels of construction traffic would also vary during the construction period, the predicted effects would not occur on a continuous basis.

Highway condition surveys

8.3.59. The proposed highway condition survey was the subject of discussion at the ISHs and a small number of WRs were received regarding this issue. The outline CTMP [REP7-021] requires that surveys are undertaken before and after construction and would include the construction traffic route from the strategic road network to the Proposed Development Site. The survey would include main carriageway surfaces, footways, verges and any adjoining access points.

8.3.60. We note that a preliminary survey has already been undertaken and any areas in poor condition, especially those near to residential properties, would be improved prior to the commencement of the Proposed Development. In addition, during the construction phase, the route would be monitored, and remedial works undertaken where necessary. Once construction is complete, a final survey would be undertaken. Any damage would be rectified by the Applicant to a standard at least equal to that observed prior to use of the route.

8.3.61. On balance, we are content that the proposed surveys and associated works could adequately rectify any damage caused by construction traffic in an appropriate and timely manner.

Abnormal indivisible loads

8.3.62. We are aware of the concern raised by some IPs regarding the transport of abnormal indivisible loads. The ES Chapter [APP-044] states that five such loads are anticipated during the construction period. Measures to ensure the safety of all road users and minimise disruption are included in the outline CTMP [REP7-021]. They include the use of an escort car and Police escort, restricting movements to off-peak hours, and providing advance notice to affected communities.

8.3.63. We are satisfied that, given the small number of such loads over the construction period, adequate measures could be secured to ensure safe delivery with minimal disruption to local communities.

Staff and visitor parking

- 8.3.64. In our first and further Written Questions [PD-004 and PD-008], we asked the Applicant for clarification of the proposed arrangements for staff and visitor parking on the construction site and how fly parking on local roads would be prevented.
- 8.3.65. The Applicant confirmed at Deadline 4 that an area within Work areas Nos. 2 and 3 [APP-007] would be set aside for parking for staff and visitors. The design and detailed measures for controlling staff travel and all parking would be agreed through the final CTMP and discharge of Requirement 12 in the Recommended DCO.

Road width measurements on Head Hill Road and Seasalter Road

- 8.3.66. The Applicant [REP5-016] confirmed, in response to the disputed road width measurements made by Mr King [REP4-071], that topographic surveys had been undertaken at specific locations along the construction traffic route.
- 8.3.67. As the highway authority, Kent County Council also provided a response [REP7-074] confirming that, even if the measurements provided by Mr King had been used in the transport assessment, its opinion on the adequacy of the route to accommodate the construction vehicles would not have been altered.
- 8.3.68. We are aware of the discrepancy between the figures provided by the Applicant and Mr King and note that this was not satisfactorily explained in detail. Nevertheless, the forward visibility at the pinch points on Head Hill Road and Seasalter Road would still exceed 60m based on the measurements made by Mr King. Taking into consideration the view of Kent County Council, as the relevant highway authority, we believe that such a distance would enable the drivers of construction vehicles to anticipate potential issues and give way to oncoming vehicles.
- 8.3.69. Small residual delays could affect the drivers of vehicles utilising the construction traffic route because of restricted road width. However, such delays would be temporary, and we are satisfied that this would not result in significant levels of inconvenience to road users.

Suitability of roads and impact on local businesses

- 8.3.70. On Unaccompanied Site Visit 1, we made careful observations of the proposed construction access route from the A299 via Head Hill Road and Seasalter Road, passing through the villages of Graveney and Goodnestone, to the existing Cleve Hill substation site entrance. We noted that both Head Hill Road and Seasalter Road are rural in nature, with very limited footpath or street lighting provision. Several properties lie close to the road. We took very careful note of the location of Graveney Primary School, its car park, and its playing field.
- 8.3.71. We have carefully considered the predicted construction traffic flows over a 24-month construction period. Daily total construction traffic movements would peak during week 100 at 222 (i.e. 111 vehicles in and

out), comprising 162 LGV movements and 60 HGV movements. Peak HGV flows would be 80 movements per day for four weeks around week 27. Overall, the average number of daily movements would be 62 HGVs and 90 LGVs. On balance, whilst we recognise the rural nature of the roads, we are content that the mitigation measures and methods of monitoring and management in the outline CTMP [REP7-021] would be effective in minimising adverse effects such as delays, severance, fear and intimidation. No permanent, significant harm to the character of the rural lanes is likely given the temporary nature of the construction traffic.

- 8.3.72. We are satisfied that the Applicant has duly identified the presence of businesses and residential properties along the construction traffic route in Chapter 14 of the ES at section 14.3.9 [APP-044]. Accordingly, we agree with the Applicant that the assessment has taken account of the appropriate sensitive receptors.

Pedestrian and cyclist safety

- 8.3.73. We have considered the evidence presented to us in relation to traffic-sensitive pedestrian and cyclist receptors along the construction traffic route to the Proposed Development Site.
- 8.3.74. As part of the London Array project a pedestrian bridge was built across the railway line to connect Graveney Primary School to its new car park. Measures in the outline CTMP [REP7-021] mean that HGVs would not be permitted to leave or deliver to the Proposed Development Site between 0830 to 0930 or 1500 to 1600, thereby avoiding the school start and finish times. Whilst we are aware that the playing field lies on the opposite side of the road from the school, we do not consider that the frequency of HGV vehicles would be so great as to reduce the ability of supervised child pedestrians to cross safely.
- 8.3.75. In terms of pedestrian safety on Head Hill Road and Seasalter Road, although both of these roads generally lack footways along most of their routes, it would appear that pedestrian activity is low. We also note that these roads are currently used by large vehicles including delivery lorries and buses. Moreover, the ES assessment concluded that, on average, up to 12 two-way HGV movements would occur between 0930 and 1500. Whilst we recognise that this represents an increase in traffic movements, we do not believe that the frequency of HGV vehicles would be so great as to materially affect pedestrian safety or to reduce the ability of pedestrians to cross Head Hill Road and Seasalter Road safely.
- 8.3.76. With regard to Public Rights of Way (PRoW), we note that it is the Applicant's intention, where practicable and safe, to keep all PRoWs that cross the Proposed Development Site open during construction and to protect users by erecting open mesh fencing where a PRoW borders or crosses the site. Further detail on how PRoWs would be managed to ensure they are safe to use is detailed in the outline Public Rights of Way Management Plan, at Appendix G to the CTMP [REP7-021] with final approval to be secured by Requirement 12 of the Recommended DCO.

- 8.3.77. In respect of cycling safety, while increased numbers of HGVs would be seen on Seasalter Lane, most HGV movements would occur during 0930 and 1530 on week days, a period when the Applicant contends that following the results of the Non-Motorised Users survey, as detailed in Table 14.8 of the ES [APP-044], there is less use by recreational cyclists. In addition, measures such as reduced speed limits and priority for other road users form part of the outline CTMP which forms the basis for the discharge of Requirement 12 of the Recommended DCO. It is also to be noted that the construction effects on cyclists would be temporary.
- 8.3.78. We are content that, with the CTMP measures in place, there would not be a significantly increased risk of accidents involving pedestrians or cyclists.

Air quality

- 8.3.79. We note that the proposed earthwork activities have the potential to produce dust. In respect of construction, there would be limited dust creating activities, with such activities being limited to the electrical compound, transformers and the solar PV module installation.
- 8.3.80. We accept that construction dust emissions may have a short-term effect on Particulate Matter (PM₁₀) levels. The Applicant's assessment notes that existing baseline PM₁₀ concentrations are below the annual mean PM₁₀ objectives. As such, levels are unlikely to be exceeded during the temporary construction period and effects would not be significant. In respect of the decommissioning phase, the assessment concluded that predicted dust effects would be no greater than the construction phase.
- 8.3.81. The concerns relating to vehicle emissions as a result of the construction traffic are noted. We accept that due to increased traffic volumes and reduced traffic speeds, PM₁₀ and Nitrogen Dioxide (NO₂) levels would increase along the access route. Despite the traffic flow increase, as illustrated in Table 16.15 of the ES [APP-046], the construction traffic emissions would not have a significant effect on local air quality.
- 8.3.82. In respect of engine exhaust fumes from off-road vehicles, such as plant and machinery, the Applicant acknowledges that such emissions have the potential to affect local air quality. However, the assessment concludes that given the existing low levels of baseline pollution, effects would be temporary, and emissions would be not be significant.
- 8.3.83. We note that mitigation measures within the outline CTMP [REP7-021] would also prevent or minimise the release of dust entering the atmosphere and/or from being deposited on nearby receptors. Measures in relation to off-road vehicles such as the use of Diesel Particulate Filters and the use of ultra-low sulphur are also included within the outline CTMP.
- 8.3.84. We are satisfied that, with the CTMP measures in place, there would be no significant effects in respect of air quality during the construction or decommissioning phases.

8.3.85. The concerns raised regarding air quality during the operational phase are noted. However, given the low levels of predicted traffic generated during the operational phase we are satisfied that no exceedances of air quality objectives would occur.

Conclusions on Traffic and Transport

8.3.86. The matter of access, transport and traffic was an important consideration in the Examination, generating many representations. We conclude that the Applicant has adopted a robust, consistent, reasonable and proportionate approach to the assessment.

8.3.87. We are assured that, given the negligible level of traffic generated during the operational phase and as confirmed in the PINS Scoping Opinion [APP-199], a detailed assessment of operational effects was not required.

8.3.88. Overall, we are satisfied that appropriate proposals for necessary construction mitigation are included in the outline CTMP [REP7-021], and no significant residual effects would remain. These would be the subject of detailed approval and implementation secured by Requirement 12 in the Recommended DCO.

8.3.89. In respect of the decommissioning phase, we are content that the anticipated effects from decommissioning are likely to be of no greater significance than those during construction.

8.3.90. Accordingly, taking all relevant documents and policies into account, we conclude that:

- the identified temporary significant effects during construction would be appropriately mitigated by measures in the CTMP - the Proposed Development is therefore compliant with NPS EN-1 paragraphs 5.13.8 to 5.13.12;
- the Proposed Development accords with relevant local plan policy in respect of road user safety and no permanent damage in terms of character of the rural lanes would occur;
- as no unacceptable impact on highway safety has been identified and no severe residual cumulative impacts would occur, the Proposed Development also complies with the NPPF; and
- traffic and transport matters do not weigh heavily against the Order being made, though the temporary effects on the local population, in particular, are a minor negative factor to be considered in the planning balance.

8.4. NOISE AND VIBRATION

Introduction

8.4.1. This section addresses the noise and vibration effects of the Proposed Development. The impact of noise and vibration on important ecological receptors is dealt with separately in Chapter 7 of this Report. Although we identified noise in our IAPI we did not make specific reference to

vibration as a principal issue. However, we recognise that both the Applicant and IPs have in various places referred to 'noise and vibration'. We therefore include consideration of vibration, so far as is relevant.

Policy Considerations

Overarching National Policy Statement for Energy

- 8.4.2. Noise considerations are set out in National Policy Statement for Energy (NPS EN-1) paragraphs 5.11.1 to 5.11.13. Mitigation is considered in paragraphs 5.11.11 to 5.11.13.
- 8.4.3. Paragraph 5.11.1 of NPS EN-1 acknowledges that *'Excessive noise can have wide-ranging impacts on the quality of human life, health and use and enjoyment of areas of value such as quiet places and areas with high landscape quality'*.
- 8.4.4. Regarding the need for a noise assessment, paragraph 5.11.4 of NPS EN-1 advises that where noise impacts are likely to arise from a project, an application should be accompanied by a noise assessment. Such an assessment should meet the criteria set out in paragraph 5.11.4.
- 8.4.5. Projects should demonstrate good design through optimisation of scheme layouts to minimise noise emissions and, where possible, the use of landscaping, bunds or noise barriers to reduce noise transmission (Paragraph 5.11.8). Paragraph 5.11.6 also refers to the need for the project to assess operational noise using the principles of relevant British Standards, including BS 4142 *'Method for rating and assessing industrial and commercial sound'*.
- 8.4.6. Noise mitigation measures may include one or more of the following options (Paragraph 5.11.12):
- engineering;
 - lay-out; and
 - administrative.

National Policy Statement for Electrical Networks Infrastructure

- 8.4.7. The NPS for Electrical Networks Infrastructure (NPS EN-5) mainly covers above-ground electricity lines of 132 kV and above. However, as a grid connection is also proposed, we consider NPS EN-5 to be relevant to the Proposed Development.
- 8.4.8. Section 2.9 of NPS EN-5 considers noise and vibration and states that audible noise effects can arise from substation equipment such as transformers, quadruple boosters and switched capacitors.
- 8.4.9. Statutory requirements and the relevant sections of the Noise Policy Statement for England, National Planning Policy Framework (NPPF) and National Planning Policy Guidance (PPG) on noise should be met in construction and operation.

The Development Plan

- 8.4.10. Given the relevance and importance of the development plan, the following policies are also considered pertinent.
- 8.4.11. Bearing Fruits 2031: The Swale Borough Local Plan, adopted July 2017 (The Swale Borough Local Plan):
- Policy DM 14(8) - General Development Criteria; and
 - Policy DM 20(7) - Renewable and Low Carbon Energy.
- 8.4.12. These policies seek, amongst other things, to ensure that impacts on amenity and other sensitive uses are minimised and mitigated to acceptable levels. The policies are broadly consistent with the NPS EN-1 and the NPPF.
- 8.4.13. Canterbury District Local Plan, adopted July 2017:
- Policy DBE3(i) - Principles of Design; and
 - Policy QL12 - Potentially Polluting Development.
- 8.4.14. These policies seek, amongst other things, to ensure development does not cause significant harm to amenity in terms of noise and to also minimise impacts from noise. The policies are broadly consistent with NPS EN-1 and the NPPF.

The Applicant's Case

- 8.4.15. The principal Application document relating to noise was the Environmental Statement (ES) Chapter on Noise and Vibration [APP-042]. This was supported by appendices containing further technical details on the method of assessment, baseline survey information and modelling assumptions ([APP-059] and [APP-234] to [APP-243]).

Methodology

- 8.4.16. The scope of the noise and vibration assessment was agreed with Swale Borough Council through consultation as set out in the Applicant's EIA Scoping Report [APP-198] and the Scoping Opinion from the Planning Inspectorate (PINS) [APP-199], as summarised in the ES [APP-042].
- 8.4.17. The ES [APP-042] set out the method of assessment for construction and operational airborne noise and vibration. Reference was made to the main legislation and standards of relevance to construction and operational noise, including BS 4142.
- 8.4.18. The methods of assessment for construction, operation and decommissioning phases were described. These identified receptors, the criteria used to determine the sensitivity of a receptor, and the magnitude of impacts. Assumptions, constraints, background baseline survey, assessment findings, and proposed mitigation were detailed.

Potential effects

Construction phase

- 8.4.19. The assessment of potential effects was set out in section 12.5 of the ES [APP-042]. In summary, the principal temporary effects during the construction phase were predicted to be:
- in terms of construction noise, the daytime noise criterion of 65 decibels (dB) L_{Aeq} ¹³ at the closest point to each receptor would not be exceeded for more than one month - this would have a less than moderate effect;
 - in respect of vibration levels due to the use of vibratory rollers during the construction of tracks and hard standing areas, levels were predicted to be below the level of perception at most of the assessed locations;
 - vibration levels due to piling operations associated with the construction of the solar panel framework at most assessed locations would be below the level of perceptibility; and
 - on Head Hill Road (both north and south), the predicted change in the level of road traffic noise would be less than 1dB, a negligible effect, while on Seasalter Road, the change would be less than 3dB, a minor effect.
- 8.4.20. The Applicant did not consider that these effects would be significant.

Operational phase

- 8.4.21. Table 12.9 of the ES [APP-042] details the location of the eight closest residential properties where operational noise limits were applied, and assessments undertaken. Table 12.26 of the ES summarised the assessment of operational noise. The predicted effects were all said to be reversible on decommissioning and can be summarised as:
- at 1 Crown Cottages and Cleve Farm, operational noise was predicted to be 4dB above the daytime noise limit of 65dB L_{Aeq} ; and
 - for all receptors, during night time periods the level of noise would be above the rating level noise limit as detailed in Table 12.8 of the ES.
- 8.4.22. Accordingly, the effects on the occupiers of all the dwellings included in the assessment would be significant in terms of operational noise. It was concluded that additional mitigation measures, over and above the embedded mitigation, would be necessary to ensure that noise levels during operation would not result in significant effects.

Decommissioning phase

- 8.4.23. Decommissioning effects would be similar to those during construction, and best practice methods and relevant guidance and legislation applicable at the time would be applied. The Applicant therefore

¹³ L_{Aeq} is the sound pressure level in decibels, equivalent to the total sound energy over a given time period

concluded that any residual effects during decommissioning would not be significant.

Cumulative effects

- 8.4.24. The Applicant had not identified any noise-generating developments within 1km of the Proposed Development with the potential to contribute to cumulative effects.

Mitigation measures

- 8.4.25. Section 12.6 of the ES [APP-042] stated that mitigation had been incorporated into the scheme design, including the outline Construction Environmental Management Plan (CEMP) [REP7-015] and the outline Construction Traffic Management Plan (CTMP) [REP7-021].
- 8.4.26. The approved CEMP would be the overarching document to control impacts during construction. Section 1.1 of the outline CEMP sets out the core working hours. The Applicant contended that the proposed hours would assist in managing construction noise and vibration and ensure that effects were minimised as far as reasonably practicable.
- 8.4.27. As detailed within the outline CTMP [REP7-021] which would be secured by Requirement 12 of the Recommended Development Consent Order, deliveries of plant and materials by HGV to the site would only take place by designated routes and within times agreed with Swale Borough Council. In addition, the construction work programme would be phased. The phasing of construction activities would assist in reducing the combined effects arising from several noisy operations all taking place during the same period. In terms of vibration, a speed limit of 20mph for HGVs would also be imposed, as detailed within the outline CTMP.
- 8.4.28. It is noted that the final detail of the measures would still need to be secured through the approval of the CEMP to be submitted to the local planning authority in order to discharge Requirement 11 of the DCO.
- 8.4.29. In terms of ensuring specific effective noise mitigation measures for the eight closest residential properties, Section 12.6.2 of the ES [APP-042] discusses possible mitigation approaches. These would be determined following a further operational noise assessment required by Requirement 15 of the Recommended DCO [REP17-003] to confirm that mitigation measures had been designed to ensure that operational noise levels would not exceed daytime and night-time rating levels as set out in the ES.

Applicant's summary of predicted effects

- 8.4.30. Table 12.31 of the ES [APP-042] summarised the assessment of the likely effects of construction noise and vibration for the construction, operational and decommissioning phases of the Proposed Development. Following the measures embedded in the Proposed Development and those mitigation measures required to meet the required noise levels at receptor locations, the Applicant concluded that there would be no significant effects on human receptors at the dwellings included in the

assessment during the construction, operation or decommissioning phases.

Planning Issues

Relevant Representations

- 8.4.31. Noise and vibration issues were mentioned in several RRs. Many of the Interested Parties (IPs) raised concerns about: traffic noise, particularly during construction; operational noise from equipment, including battery storage and invertors; and the general impact on the local community. Examples of representations received include those from Ms Risvold [RR-196], Ms Williams [RR-629] and Graveney Rural Environmental Action Team (GREAT) [RR-770], which, amongst other things, raised concern regarding the noise generated by the equipment in the solar panels and the battery storage facility.
- 8.4.32. The RR received from Dynamic Production Solutions [RR-555] also stated that the noise data submitted by the Applicant was incomplete and in need of further testing. It did not believe that, given the tranquil nature of the surrounding marshes, it would be possible to mitigate fully against the noise generated by the Proposed Development.

Local Impact Reports

- 8.4.33. Swale Borough Council's Local Impact Report (LIR)[REP1-005] set out the relevant adopted policy and the key issues relating to noise and vibration. These were listed as: construction activity including construction traffic movements; operational noise arising from transformers, the substation and the battery storage elements; and noise related to the decommissioning phase of the project.
- 8.4.34. Swale Borough Council also stated that the predicted noise levels from the intended equipment were unlikely to result in complaints. In addition, the Council considered noise mitigation measures should be included in the final design to ensure that noise did not exceed background levels.
- 8.4.35. Canterbury City Council only referred to noise in its LIR [REP1-002] in terms of policy LB10 which, amongst other things, stated the importance of maintaining trees, hedgerows and woodland to help to screen noise and pollution.
- 8.4.36. Kent County Council deferred noise and vibration matters in the LIR [REP1-004] to Swale Borough Council and Canterbury City Council.

Other representations to the Examination

- 8.4.37. A number of further representations were made during the Examination in relation to noise. Representations from Faversham Town Council [REP2-049], Graveney with Goodnestone Parish Council [REP2-050] and Mr King [REP2-112] related to concern over construction traffic noise levels. Furthermore, both the Ramblers [REP2-100] and Mr Ledger [REP2-103] referred to existing background noise levels and the

Ramblers also noted the absence of 'man-made' noise in the locality of the Proposed Development.

- 8.4.38. Mr Lowe [REP2-063] raised concern that the use of both L_{Aeq} and L_{A90} could lead to the assessment of noise effects being misleading. Mr Lowe drew attention to the Applicant's use of background noise levels using L_{A90} (1 hour) and project noise levels based on L_{Aeq} averaged over a 16-hour day.
- 8.4.39. At Deadline 7, GREAT [REP7-099] confirmed that it had instructed Able Acoustics to undertake a review of the ES [APP-042]. The review by Able Acoustics [REP7-100] raised several points in relation to the assessment. Consequently, GREAT requested that no recommendation be made by the ExA regarding noise and vibration until such issues had been addressed.
- 8.4.40. In both the Swale Borough Council [REP4-037] and Canterbury City Council [REP5-014] SoCGs, the Councils provided confirmation that the noise and vibration methodology, assessments, identification of receptors and proposed mitigation was acceptable. In the Kent County Council SoCG, [REP7-029] confirmation was given that noise and vibration matters were deferred to Swale Borough Council and Canterbury City Council.

ExA Response

Approach and methodology

- 8.4.41. There was little contention over the general approach taken to the noise and vibration assessment. We note the concern raised by GREAT and we have given careful regard to the issues it raised. In respect of the concerns expressed by Mr Lowe, we are content that the methodology used by the Applicant is transparent, as detailed in paragraph 67 of the ES [APP-042] and is in accordance with BS 4142. We are therefore satisfied that the assessment undertaken by the Applicant was sufficiently robust to provide reliable outputs. We do not believe that any of the detailed concerns about the assessment make a material difference to the outcome or conclusions.

Construction phase effects

- 8.4.42. As detailed in Table 12.12 of the ES [APP-042], we are aware that piling activities would lead to predicted noise levels above the daytime noise criterion of 65 dB L_{Aeq} at the eight closest residential properties, as detailed in paragraph 8.4.21 above. However, for Nagden House, Nagden Cottages, Coneybank, 4 Crown Cottage and Cleve Farm, noise levels would not exceed 67dB L_{Aeq} , and the marginal exceedance (2dB) above the relevant daytime noise criterion would not be readily perceptible.
- 8.4.43. Furthermore, whilst noting that 65dB L_{Aeq} would be exceeded, we recognise that the predicted noise levels are 'worst case' and have been assessed from the closest point at which each construction activity would take place. It therefore follows that as work moves away from the

relevant affected property noise levels would diminish progressively. The ES also indicates that, where practicable, the work programme would be phased, which would help to reduce the combined effects arising from several noisy operations.

- 8.4.44. In addition, construction activity within each field would take approximately 4 weeks thereby limiting the duration of adverse impacts on the closest residential properties. Taking Warm House as the worst-case example, the nearest piling operations would be at a distance of approximately 80m from the house. The ES indicates that at 160m from the house the effects would be reduced to below the 65dB L_{Aeq} criterion. We observe therefore that as the majority of operations would take place beyond this distance, the maximum adverse effects would be considerably less than the four-week construction period.
- 8.4.45. In terms of vibration levels, these are likely to be below the level of perception at all residential properties apart from Warm House. In addition, we note that when the use of vibratory rollers during the construction of tracks and the hard-standing areas required for the transformers is underway, effects would approach the level of perception at 4 Crown Cottages. However, such effects would be experienced for less than one week at each of the above dwellings.
- 8.4.46. For piling operations associated with the construction of the solar panel framework, vibration levels would be just below the perception threshold at Warm House, the nearest receptor. This would occur for approximately one week. For the remaining receptors, vibration due to piling operations would generally be below the level of perceptibility.
- 8.4.47. Accordingly, we concur with the findings of the assessment in terms of construction activities and find no reason to disagree with the conclusions in the Applicant's report.

Operational phase effects

- 8.4.48. We agree with the Applicant's findings that the closest receptors detailed in Table 12.9 of the ES [APP-042] are the most noise sensitive. The noise effects from the operation of the Proposed Development would be higher at these locations than at any sensitive locations located further away.
- 8.4.49. As is standard practice, the assessment included several worst-case scenarios. In terms of night-time noise, such scenarios included all noise sources being fully operational during the night. In practice, many of the noise sources are dependent on sunlight levels, and batteries are only likely to be used for electricity export during periods of peak demand rather than continuously. We therefore agree that night-time noise levels are likely to be substantially lower than modelled in the assessment.
- 8.4.50. In regard to daytime periods, the assessment concluded that operational noise would be 4dB above the daytime noise criterion of 65db L_{Aeq} at both 1 Crown Cottages and Cleve Farm. As such, we agree that further mitigation is necessary to ensure that any increased noise experienced by those who live there does not result in a significant impact.

- 8.4.51. We have given weight to both the embedded and additional mitigation measures detailed in section 12.6.2 of the ES [APP-042].
- 8.4.52. Furthermore, as previously noted, Requirement 15 of the Recommended DCO requires the Applicant to undertake a further operational noise assessment. We are content that this would provide the local planning authority with the opportunity to ensure that the design and specific equipment used in the Proposed Development does not exceed the rated noise limit.
- 8.4.53. We have carefully considered the concerns relating to operational noise and vibration raised by IPs during the Examination. We are satisfied that the mitigation measures identified in the ES and the controls provided through the Recommended DCO, including the outline CTMP [REP7-021] and outline CEMP [REP7-015], are adequate to ensure no significant adverse noise and vibration impacts would result from operating the Proposed Development.
- 8.4.54. We therefore find no reason to disagree with the conclusions of the Applicant's assessment.

Decommissioning phase effects

- 8.4.55. Decommissioning effects would be similar to those for the construction phase. In addition, the Applicant submitted an outline Decommissioning and Restoration Plan [REP7-017] which would be secured by Requirement 17 of the Recommended DCO [REP17-003]. Accordingly, with appropriate mitigation measures in place, we find no reason to disagree with the conclusions of the Applicant's assessment.

Conclusions on Noise and Vibration

- 8.4.56. We are satisfied that the Applicant has adopted a robust, consistent, reasonable and proportionate approach to the assessment of noise and vibration and has made appropriate proposals for necessary mitigation in compliance with NPS EN-1 paragraphs 5.11.11 to 5.11.13.
- 8.4.57. We are satisfied that the further operational noise assessment needed under Requirement 15 of the Recommended DCO would allow appropriate mitigation to be secured to ensure no residual significant effects remain.
- 8.4.58. Taking all relevant documents and policies into account, we conclude that:
- the assessed construction effects of the Proposed Development would be temporary;
 - the Proposed Development would lead to adverse impacts in terms of operational noise and vibration, but this would be capable of being mitigated appropriately and so is compliant with both NPS EN-1 and NPS EN-5;
 - the Proposed Development is policy compliant with the NPPF and PPG in relation to noise and any associated impacts and policy DM14(8)

and DM 20(7) of The Swale Borough Local Plan and Policies DBE3(i) and QL12 of the Canterbury District Local Plan; and

- as such, noise and vibration are not matters that weigh against the Order being made and are neutral in the overall planning balance.

8.5. SOCIO-ECONOMIC EFFECTS

Introduction

- 8.5.1. This section addresses the social, economic and land use effects of the Proposed Development, which includes tourism; recreation; land use; employment; human health; public access; health and safety at work; electric, magnetic and electromagnetic fields; telecommunications; television reception; and utilities and waste issues.
- 8.5.2. Issues relating to Agricultural Land Classification are examined in section 8.2 of this chapter. Effects on residential amenity and glint and glare are considered in Chapter 6 of this Report. Issues relating to safety, including security and accidents, are covered at section 8.7.

Policy Considerations

National Policy Statements

- 8.5.3. Socio-economic considerations are set out in National Policy Statement (NPS) EN-1 paragraphs 5.12.1 to 5.12.8, with mitigation in paragraph 5.12.9. Paragraph 5.12.3 states that applicants should consider all relevant socio-economic impacts, which may include:
- the creation of jobs and training opportunities;
 - the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities;
 - effects on tourism;
 - the impact of a changing influx of workers during the different construction, operation and decommissioning phases of the infrastructure; and
 - cumulative effects – if development consent were to be granted for a number of projects in a region and these were developed in a similar timeframe.
- 8.5.4. At paragraph 5.10.24 of NPS EN-1, which deals with land use including open space, green infrastructure and Green Belt, specific reference is made to the impact on tourism and Public Rights of Way (PRoW):

'Rights of way, National Trails and other rights of access to land are important recreational facilities for example for walkers, cyclists and horse riders. The IPC should expect applicants to take appropriate mitigation measures to address adverse effects on coastal access, National Trails and other rights of way. Where this is not the case the IPC should consider what appropriate mitigation requirements might be attached to any grant of development consent.'

- 8.5.5. The decision-maker should also consider whether mitigation measures are necessary to mitigate any adverse socio-economic impacts of the development.

National Planning Policy Framework

- 8.5.6. In relation to PRow, paragraph 98 of the National Planning Policy Framework (NPPF) states:

'Planning policies and decisions should protect and enhance public rights of way and access, including taking opportunities to provide better facilities for users, for example by adding links to existing rights of way networks including National Trails.'

The Development Plan

- 8.5.7. The following policies are of relevance:
- 8.5.8. Bearing Fruits 2031: The Swale Borough Local Plan, adopted July 2017 (The Swale Borough Local Plan):

- Policy ST 1 – Delivering sustainable development in Swale;
- Policy ST 7 – The Faversham Area and Kent Downs strategy;
- Policy CP 1 – Building a strong, complete economy;
- Policy DM 6 – Managing transport demand and impact;
- Policy DM 20 - Renewable and low carbon energy;
- Policy DM 31 – Agricultural land.

- 8.5.9. Canterbury District Local Plan, adopted July 2017:

- Policy CC 1 – Renewable and low carbon energy production development (apart from wind energy development).

- 8.5.10. In summary, these policies seek to ensure that proposals safeguard tourism and support local employment opportunities. In addition, provision must be made to ensure pedestrian and cycle routes are maintained or provided.

The Applicant's Case

- 8.5.11. The principal application documents relating to socio-economics were:

- [APP-043] Environmental Statement – Socio-Economics, Tourism, Recreation and Land Use Chapter;
- [APP-047] Environmental Statement – Miscellaneous Issues;
- [APP-060] Environmental Statement - Socio-Economics, Tourism, Recreation and Land use Figures;
- [APP-244] Environmental Statement – Soils and Agricultural Use and Quality Report for Cleve Hill Solar Park;
- [APP-246] Environmental Statement – Glint and Glare Study;
- [APP-247] Environmental Statement – National Grid Consultation; and
- [APP-248] Environmental Statement – United Kingdom Power Networks (UKNP) Consultation.

- 8.5.12. Documents subsequently submitted into the Examination by the Applicant relating to socio-economic issues included:
- [AS-025] an Additional Submission accepted at the discretion of the Examining Authority - Equality Impact Assessment;
 - [AS-055] the Applicant's to the Final Submission by Mr Montague;
 - [REP2-006] the Applicant's response to ExQ1, which includes a section on socio-economic matters;
 - [REP2-025] a glint and glare guidance note in response to a question raised in ExQ1;
 - [REP3-022] a clarification note on glint and glare;
 - [REP4-020] the Applicant's response to ExQ2, which includes a section on socio-economic matters;
 - [REP4-047] Outline Skills, Supply Chain and Employment Plan;
 - [REP5-026] a revised Outline Skills, Supply Chain and Employment Plan; and
 - [REP7-030] the Applicant's response to the Rule 17 letter.

Assessment methodology

- 8.5.13. The assessment of socio-economic effects was informed by consultation, desk-based research and site survey. The assessment methodologies for those topics included in the ES [APP-043] were specific to each topic area and were detailed in the relevant subsection of the ES chapter.

Baseline conditions

- 8.5.14. The ES set out a detailed description of the current socio-economic, recreation resource and land use context of the Proposed Development Site at section 13.3 [APP-043]. The baseline conditions in relation to glint and glare, human health, security, public access, health and safety at work, electric, magnetic and electromagnetic fields, telecommunications, television reception and utilities, waste and major accidents or disasters were established through desk-based assessments and consultation. Each description of baseline conditions was set out in the relevant section of the ES [APP-047].

Applicant's summary of potential effects

- 8.5.15. A tabular summary of the likely effects, mitigation and residual effects was provided at section 13.8 of the ES [APP-043]. The ES concluded that the positive socio-economic effects of the Proposed Development, such as an increase in local employment, were not significant. It was also concluded that there would be a negligible adverse effect on tourism during both the construction and operational phase that would not be significant. Issues relating to agriculture land classification are discussed in detail in section 8.2 of this chapter.
- 8.5.16. Significant effects on the users of The Saxon Shore Way (ZR484) and PRoW ZR485 were identified during construction. Such effects were identified for sections of the footpaths approximately 1km in length and for a temporary period of 12 months. Further, the effects would only be experienced when construction occurred within 500m of the footpaths. The Applicant also identified predominant use of PROWs at weekends. It

was to be noted that construction activities would cease at 1300 hours on Saturdays, with no activity on Sundays or Public holidays.

- 8.5.17. During the operational phase, a material change to PRoW ZR485 was predicted to occur and this was assessed as a significant effect. All other effects on PRoWs within and near the Proposed Development Site were assessed as not significant.
- 8.5.18. Section 13.7 of the ES [APP-043] concluded that there would be no significant cumulative effects on socio-economics or tourism in respect of Swale, Canterbury or Kent. No direct cumulative effects on recreation receptors were anticipated.
- 8.5.19. No significant effects or cumulative effects were identified in terms of human health, electric, magnetic and electromagnetic fields, telecommunications, television reception, utilities or waste management.

Mitigation measures

- 8.5.20. Section 13.6 of the ES [APP-043] and 17.5.3.2 of the ES [APP-047] confirmed that mitigation had been incorporated into the scheme design. In terms of construction phase mitigation, an outline Public Rights of Way Management Plan (PRWMP) was proposed and attached as an Appendix to the outline Construction Traffic Management Plan (CTMP) [REP7-021]. This plan provided measures to mitigate direct effects on users of the PRoW network.
- 8.5.21. The outline PRWMP would still need to be secured through the final version of the CTMP [REP7-021] and the discharge of the Recommended DCO Requirement 12 by the relevant local authority.
- 8.5.22. In response to our further Written Questions [PD-008], the Applicant submitted an outline Skills, Supply Chain and Employment Plan (SSCEP) [REP5-026]. The main aim of the SSCEP was to raise awareness of the local supply chain and employment opportunities and to ensure that economic benefits from the Proposed Development were realised locally.

Equality Impact Assessment

- 8.5.23. The Applicant submitted an Equality Impact Assessment (EQIA) [AS-025]. This considered the potential for the Proposed Development to discriminate based on certain protected characteristics under the Equality Act 2010 (the Act). It is provided to assist the SoS's consideration of the public sector equality duty under section (s)149 of the Act.
- 8.5.24. The only aspect identified to have the potential to affect a group of people with protected characteristics differently to that of the general population was in respect of the traffic and access effects during construction in relation to young people attending Graveney Primary School.
- 8.5.25. The issue of traffic and access is discussed in more detail in section 8.3 of this chapter. However, in respect of the EQIA, the Applicant contended

that mitigation measures in the outline CTMP [REP7-021], which would be secured by Requirement 12 of the Recommended DCO [REP17-003], would minimise the potential for any inequality and eliminate discrimination.

Planning Issues

Relevant Representations

- 8.5.26. Socio-economic issues were mentioned in a significant number of RRs. Many Interested Parties (IPs) raised concern in relation to the well-used public footpaths in and around the Proposed Development Site; the impact on the local economy in terms of loss of tourist numbers; impact on human health and well-being [RR-031], [RR-196] and [RR-277]; lack of direct local benefit [REP3-051] and the loss of productive agricultural land [RR-70] and [RR-137].
- 8.5.27. Examples of representations received included those from The Ramblers [RR-232] and Faversham Town Council [RR-274] that, amongst other things, raised concern regarding the impact of the Proposed Development on users of the Saxon Shore Way and surrounding footpaths. Ms Hewett [RR-008] also referred to the loss of the economic value of the area and the impact the proposal would have on residents, with almost no local benefit.

Local Impact Reports

- 8.5.28. In its Local Impact Report (LIR) Swale Borough Council [REP1-005] set out the relevant adopted policy regarding managing transport demand and impact and how policy DM 6 of The Swale Borough Local Plan seeks to give priority to the needs of pedestrians and cyclists, to retain existing PRoW and to create new routes in appropriate locations.
- 8.5.29. The LIR acknowledged that the Proposed Development did not seek to obstruct any existing PRoWs but suggested that it would alter users' experience of long stretches of the footpaths.
- 8.5.30. Relevant policies regarding tourism, the economy and land use were also noted. For tourism and the economy, the Council stated that the Proposed Development would more than likely deter visitors from seeking the solitude, long distance views and appreciation of wildlife that the area currently enjoys. Accordingly, this would be to the detriment of both recreational and tourist objectives set by the Council and would be contrary to Policies ST 1, ST 7 and CP 1 of The Swale Borough Local Plan.
- 8.5.31. In its LIR [REP1-002], Canterbury City Council considered that the Proposed Development would have limited economic benefit to the local authority area.
- 8.5.32. In its LIR [REP1-004], Kent County Council acknowledged the Applicant's intention to keep the PRoWs open and accessible but requested a 'hierarchy of intervention' to manage any impact. The potential for surface damage during construction was also identified, and the Council

noted that it would be the Applicant's responsibility to make good any damage.

- 8.5.33. Kent County Council considered that the Proposed Development would transform the character of the landscape from arable to industrial and suggested that visual impacts could deter use of the PRoWs.
- 8.5.34. The proposed new permissive path, which would connect PRoWs ZR488 and ZR484, was welcomed by Kent County Council. However, the Council was keen to see its request for a new, off-road footpath between existing PRoWs CW90 and CW55 included in the Proposed Development.
- 8.5.35. Matters relating to land use, glint and glare and tourism and economy were deferred by Kent County Council to Swale Borough Council and Canterbury City Council.

Other representations to the Examination

- 8.5.36. Canterbury City Council [REP5-014] confirmed in their Statement of Common Ground (SoCG) that the EIA methodologies as set out in the ES [APP-043] were acceptable. It also confirmed that the Proposed Development would result in minimal employment benefits in its administrative district.
- 8.5.37. Canterbury City Council further stated that it agreed with the Applicant's assessment on glint and glare, human health, EMFs, telecommunications and television reception, utilities, and major accidents and disasters.
- 8.5.38. Swale Borough Council provided confirmation in the SoCG [REP4-037] that the methodologies set out in the ES [APP-043] were appropriate. It also considered that the impacts on users of ZR485 and the Saxon Shore Way (ZR484) would be greater than those found in the ES. The Council further confirmed agreement regarding glint and glare issues.
- 8.5.39. Socio-economic, tourism and recreation issues were deferred to Swale Borough Council by Kent County Council, with Kent County Council only considering PRoW matters in regard of socio-economic issues in its SoCG [REP7-029]. Kent County Council agreed with all main matters relating to PRoWs, albeit it had requested the installation of electronic counters at various locations to capture PRoW use during the different phases of the project.
- 8.5.40. Furthermore, the Council also stated that the creation of a new PRoW footpath between existing footpaths CW90 and CW55 would be strongly supported. The Council also confirmed that the Proposed Development would not have an impact on any safeguarded waste management facility.
- 8.5.41. Kent County Council deferred all matters regarding human health, EMFs, telecommunications and television reception and utilities to Swale Borough Council and Canterbury City Council.

- 8.5.42. Various IPs made further representations about the potential impact of the Proposed Development on socio-economic matters throughout the Examination. Some limited concern was raised regarding the survey methodologies used to inform the assessment. In particular, the Faversham and Swale East Branch Labour Party [REP2-080] contended that a mechanical counter should have been used to record users of the surrounding footpaths, consistent with the advice given by Kent County Council. In addition, Graveney Rural Environment Action Team (GREAT) [REP3-073] criticised the Applicant's sensitive receptors map [APP-060] and contended that several businesses and sensitive locations had been omitted. Concern was raised that this map had then been used to inform other documents and assessments.
- 8.5.43. Concerns also continued to be raised regarding the loss of the physical and mental well-being benefit the area provides for local users and visitors to the area [REP3-084] and [REP7-085].
- 8.5.44. In addition, a significant level of concern was raised by a number of IPs (including, but not limited to, [REP2-080], [REP2-100], [REP2-105], [REP3-051], [REP3-076], [REP3-088], [REP7-094], [REP7-104] and [REP7-142]) regarding the level of recreational use of the Proposed Development Site and adjacent areas, and how the proposal would dramatically transform its character. Consequently, concern about a reduction in use by local people and visitors was expressed, including the knock-on negative impact on the tourist economy and local businesses.
- 8.5.45. Representations were also made by some IPs regarding the lack of benefit the Proposed Development would bring to the local community [REP2-102], [REP3-073] and [REP7-149]. GREAT specifically expressed the view that the proposed connection of existing footpaths CW55 and CW90 would not be a community benefit and its rationale was:
- 'on account of the detrimental consequences of the construction phases on the safety of the villagers and tourists, as well as the unwanted effects and hindrance arising from the closures and diversions required of existing footpaths to facilitate this development'.*
- 8.5.46. Issues relating to the potential negative impact on physical health from EMFs, potential security issues associated with the Proposed Development and concerns regarding the Applicant's Equality Impact Assessment were also raised during the Examination [REP2-113], [REP5-046] and [REP7-090].
- 8.5.47. Representations were also made about the potential opportunity for the Applicant to improve the National Cycle Network Route 1. Currently, this route follows the sea wall from Faversham in a north-easterly direction and then at Nagden it heads south-east inland along Sandbanks Road and Seasalter Road.
- 8.5.48. It was suggested at Open Floor Hearing 1 [REP2-058] and [REP2-059] and in further representations [REP7-077], [REP7-114], [REP7-127], and [REP7-141] that an opportunity existed for the cycle route to continue northwards from Nagden, across the Proposed Development Site until

reaching the coast and then to progress eastwards along the seawall towards Seasalter.

- 8.5.49. In addition, a further cycle route through the southerly part of the development and then northwards towards the seawall could provide extra options for cyclists. In the representations, it was suggested that this could be achieved by upgrading the existing farm tracks within the site.
- 8.5.50. Concern was also raised regarding the loss of productive agricultural land and the consequent loss to the farmer and also the wider community in terms of wildlife habitat [REP7-118]. Questions were raised by IPs asking for clarification of the percentage of agricultural land to be utilised [REP6-026].
- 8.5.51. In our Written Questions we explored various socio-economic issues with the Applicant and IPs. Matters discussed included, but were not limited to, the hierarchy of actions regarding PRoWs, the new footpath between public footpath CW90 and CW55.
- 8.5.52. Following these questions, the Applicant continued discussions with Kent County Council and provided confirmation of the proposed actions in the PRoW Management Plan [REP7-021]. Kent County Council confirmed acceptance of the hierarchy of actions in its SoCG [REP7-029].
- 8.5.53. The Applicant confirmed in response to the Further Written Questions [PD-008] that the dedication and adoption of a new footpath between public footpaths CW90 and CW55 was not a form of mitigation. Rather, it was identified as a means of enhancing the local footpath network. In addition, the Applicant confirmed that the potential provision of the new PRoW fell outside of the remit of the Application. Nevertheless, negotiations were ongoing with the multiple landowners and Kent County Council.

ExA Response

Local employment opportunities

- 8.5.54. The Applicant contends that, based on a 24-month construction programme, the Proposed Development has the potential to create up to 750 full time equivalent (FTE) jobs within the Kent region and 4,725 FTE within England as a whole. In respect of Gross Value Added, the Proposed Development is expected to generate £120 million in the Kent region and £670 million in England as a whole.
- 8.5.55. At Deadline 4 of the Examination, the Applicant submitted an outline Skills, Supply Chain and Employment Plan (SSCEP) [REP4-047], and a final version at Deadline 5 [REP5-026]. The main aim of the outline SSCEP is to help secure economic benefits from the Proposed Development in the local area. It would be secured by Requirement 16 of the Recommended DCO. The implementation of the outline SSCEP would assist in furthering local employment opportunities and research.

- 8.5.56. Even with the implementation of the outline SSCEP and noting the capacity within the labour market in Swale, the Proposed Development would provide a relatively low level of full-time employment opportunities. We therefore concur with the Applicant's assessment that the positive economic effects of the Proposed Development at the Swale, Canterbury and Kent would not be significant.

Impact on the tourism economy

- 8.5.57. In response to our Further Written Questions the Applicant [REP4-020] confirmed that 'Visit Kent' had published its updated 2018 study¹⁴, based on 2017 data. This confirmed that in the Swale region there were 4.7 million days trips and 398,000 overnight trips, which amounted to a total value of £228 million for the tourism economy in 2017. Looking at the Canterbury region, there were 7.1 million days trips and 647,000 overnight stays, equating to a £490 million contribution to the tourism economy.
- 8.5.58. Potential impacts on recreational users of PRowS is discussed in detail below. However, in summary, we note that during construction, effects would occur that may restrict access to the PRow that crosses the Proposed Development Site. In addition, the views experienced by recreational users of some PRowS would also be affected. We recognise that some visitors might be discouraged from visiting the area due to general construction-related disruption.
- 8.5.59. We do not dismiss the potential impact of construction. However, construction activities would be temporary in nature and would not remain static due to the phasing of the proposed works.
- 8.5.60. As a positive effect, we concur with the Applicant that construction workers employed on the Proposed Development would also add to the local economy by spending on goods and services in the locality.
- 8.5.61. In respect to the operational phase, as examined in detail in Chapter 6 of this Report, the visual amenity of the landscape would be significantly affected. However, such effects would be relatively localised and reversible upon decommissioning.
- 8.5.62. We are acutely aware of the importance of the tourism economy to both the immediate locality and wider region. However, there is no substantive evidence before us to confirm that such effects would significantly reduce visitor numbers to the area.
- 8.5.63. Any potential adverse effect on the tourism economy is likely to be greater during the construction phase. However, we would expect this to be offset to some degree by the likely positive effects of spending in the locality by those employed during the construction phase. In respect of

¹⁴ <https://www.visitkentbusiness.co.uk/tourism-business-support-and-advice/opportunities/ecnomic-impact-of-tourism-in-kent>

the operational phase, such effects are likely to be more limited and ultimately reversible.

Recreational amenity

- 8.5.64. With reference to the use of PRowS during construction, footpaths ZR485, ZR488 and ZR692 pass through the Proposed Development Site. We welcome the inclusion of an outline Public Rights of Way Management Plan (PRWMP) which is appended to the outline CTMP [REP7-021]. The plan details how the Applicant intends to ensure the PRowS remain safe to use and any disruption is minimised.
- 8.5.65. As detailed at section 3.1.3 of the PRWMP, a 'hierarchy of actions' is proposed to minimise impact on users. This approach has been agreed by Kent County Council [REP7-029] in their SoCG. Furthermore, various measures including 2m fencing, signage and 'manned' gates would be employed to ensure safe and continued access to PRowS.
- 8.5.66. Whilst measures would be in place to ensure recreational users could access PRowS where safe to do so, we are aware of more indirect effects. In this regard, during construction, recreational users of PRowS ZR484, CW55 and ZR485 would experience views of construction activity and noise effects when within 500m of construction activities over a period of 12 months.
- 8.5.67. As set out in detail in Chapter 6, recreational users of footpaths ZR484 and CW55 would retain open views to the higher ground inland but short-range views would be of solar PV panels rather than agricultural fields. From footpath ZR485, the outlook for recreational users would change from flat farmland to fencing, solar PV modules and the associated mounting structures. In terms of users of ZR488, there would be significant changes to views from the southern boundary of the Proposed Development Site near the top of Graveney Hill.
- 8.5.68. We consider that cyclists travelling westwards on National Cycle Network 1 (NCN 1) would experience significant adverse changes to views for approximately 800m along the Faversham/ Seasalter Road.
- 8.5.69. Overall, we accept that there would be a loss of amenity for recreational users, most notably in the enjoyment of PRowS and the general sense of well-being that might be experienced.
- 8.5.70. In addition to the outline PRWMP, the Applicant has proposed an enhancement measure in the form of a new permissive path that would connect footpaths ZR488 and ZR484. We note that such a proposal is welcomed by Kent County Council [REP7-029]. The new footpath would enable recreational users to undertake circular walks from the Sportsman public house, Broom Street or Graveney.
- 8.5.71. Kent County Council [REP7-029] also made a request for a new, off-road footpath between existing CW90 and CW55 footpaths. In response to our Further Written Questions, the Applicant confirmed [REP4-020] that such a proposal had *'not been identified as a means of mitigation rather it*

has been identified as a possible means of enhancing the local footpaths generally.'

- 8.5.72. We accept that the potential provision of such a new footpath falls outside the remit of the Application before us and as such, we have not given this matter any weight in our considerations. However, we welcome the commitment of the Applicant to continue to facilitate discussions and we note that the adoption of a new PRoW would be a matter for Kent County Council to administer.
- 8.5.73. On balance, we consider the construction-related effects in respect of footpaths ZR484, CW55, and ZR485 to be both temporary and reversible. We are also satisfied that the proposed mitigation measures in the outline PRWMP [REP7-021] would enable safe recreational use of the PRoWs during construction and would minimise disruption.
- 8.5.74. The identified operational effects to users of ZR484, ZR485, ZR488, CW55 and NCN 1, like the construction effects, are in the longer term considered both temporary and reversible. We do, however, accept that in certain locations, the sense of openness and remoteness currently experienced would be lost with resultant harm to the recreational experience of users of PRoWs ZR484, ZR485, ZR488, CW55 and NCN 1 for the duration of the development.
- 8.5.75. In respect of cycling, at OFH1 [EV-012] and through WRs [REP2-058], [REP2-059] and [REP7-077] an opportunity for the cycle route to continue northwards from Nagden, across the Proposed Development Site until it reached the coast and then progress eastwards along the seawall towards Seasalter was promoted. In addition, by upgrading existing farm tracks within the site, it was also suggested that a further cycle route through the southerly part of the Proposed Development Site and then northwards towards the seawall could provide extra options for cyclists.
- 8.5.76. The cycle route improvements suggested are noted. Such proposals would result in an open access route for cyclists through the Proposed Development Site. The Applicant confirmed [REP17-007] that pre-application consultation was undertaken with local communities regarding the suitability of additional footpaths, cycleways and bridleways around and through the Proposed Development Site. In response to such discussions, the Applicant noted a general lack of support, and concern was raised by local environmental groups to such proposals.
- 8.5.77. The proposed cycle route improvements did not form part of the Application. Consequently, we are unable to give this specific proposal any weight. However, and despite this, we note that the Applicant has confirmed that it is open to ongoing discussions about the proposals.

Land use

- 8.5.78. The Proposed Development would result in the loss of approximately 370 hectares of arable crop production to solar farm operation and sheep

grazing. Of this land, just over 97% is classified as 'Grade 3b' which is not classified as 'best and most versatile' land. We note that during the construction phase, some agricultural activities might be temporarily affected. The Applicant has however committed to working with the relevant landowners to minimise such disruption.

- 8.5.79. The land around and under the solar PV panels would be seeded with a grass and wildflower mix and sheep would be grazed on these areas. Such measures would result in an increase in plant biodiversity and improvement of the general health and structure of the soil.
- 8.5.80. Furthermore, the Applicant has advised that as a result of the proposed lease, the value of the land used for the Proposed Development would be greater than that of its current use. This would represent a small and very localised benefit.
- 8.5.81. We are satisfied that, although the land would be taken out of arable use, the Proposed Development would allow for a greater biodiversity of plant species and an improvement to the quality of the soil. A small, but long-term benefit to the landowner would also be experienced. We are therefore content that the proposal would not result in any significant land use effects.

Human health

- 8.5.82. Several representations were received concerning the potential impact on health and well-being (for example, [REP3-084] and [REP7-085]). As anticipated on a project of this scale, during the construction and decommissioning phases, the Proposed Development would be managed in line with the Health and Safety at Work Act 1974. Alongside this, a Construction, Design and Management co-ordinator would be appointed, prior to the commencement of the Proposed Development, to undertake the required health and safety assessments and to produce a construction phase plan. Further mitigation measures are included in the outline CTMP [REP7-021] and the outline Construction Environmental Management Plan (CEMP) [REP7-015] to ensure that construction activities are adequately and efficiently managed. We are satisfied that such measures would minimise risk to residents and site contractors.
- 8.5.83. Several Interested Parties (IPs) raised concerns about the security and safety of the Proposed Development Site in operation and the wider impact on well-being given the perceived loss of the open nature of the locality and the ability to use PRowS.
- 8.5.84. There is no substantive evidence before us to lead us to disagree with the findings of the relevant assessments in respect of unexploded ordnance, electromagnetic fields, telecommunications, television reception, utilities or waste management. We therefore concur with the Applicant that there would be no significant effects in relation to these issues.
- 8.5.85. On balance and considering the proposed mitigation measures in the outline Battery Safety Management Plan [REP6-021], outline CEMP

[REP7-015] and outline CTMP [REP7-021], we are satisfied that the Proposed Development would not result in a negative effect on people's health and well-being.

Equality issues

- 8.5.86. We are satisfied that the Equality Impact Assessment (EQIA) [AS-025] undertaken by the Applicant was proportionate and consistent with available guidance. The EQIA found that construction traffic effects had the potential to result in inequality and discrimination in relation to young people attending Graveney Primary School.
- 8.5.87. Access and transport effects are examined in detail in section 8.3 of this Report. However, we note that a car park and connecting pedestrian bridge across the railway line was created by the London Array project for Graveney Primary School. The provision of this facility negates the need for young people to walk along the carriageway. We have seen the location of the school playing field on the opposite side of the road, but while the Proposed Development would result in additional traffic movements, we do not consider that the frequency of HGV vehicles would be so great as to reduce the ability of supervised children to cross safely.
- 8.5.88. Furthermore, measures in the outline Construction Traffic Management Plan (CTMP) [REP7-021], which is secured by Requirement 12 of the Recommended DCO, would mean that HGVs are not permitted to leave or deliver to the Proposed Development Site between 0830 to 0930 or 1500 to 1600, thereby avoiding the school start and finish times.
- 8.5.89. We therefore agree with the Applicant that the proposed mitigation measures in the outline CTMP, combined with the existing car park and bridge, would effectively minimise the potential for any inequality and discrimination against the young people attending Graveney Primary School.
- 8.5.90. As detailed in the Applicant's EQIA [AS-025], individuals with specific concerns were not listed in order to respect confidentiality. We were, however, made aware of discussions between a local family and the Applicant [AS-055] and [REP17-016].
- 8.5.91. The Applicant has informed us that it has been in communication with the family and it has liaised with a UK charity that provides related specialist advice and information [AS-055]. Additional mitigation measures that relate to the specific family circumstances have been included at Appendix G of the outline CEMP [REP7-015]. Such measures include, but are not limited to, a direct point of contact throughout the operation of the Proposed Development, advance notice of construction near the property and other specific technical measures.
- 8.5.92. The Applicant has committed to open dialogue with regards to the suggested mitigation measures in the outline CEMP and any practicable and reasonable adjustments to it.

- 8.5.93. We have great empathy for the family's circumstances. We also note its dissatisfaction with the Applicant's lack of initial communication and the technical nature of some of the documentation which the Applicant provided.
- 8.5.94. We have considered the unique circumstances faced by the family and the proposed mitigation measures in the outline CEMP. There is no supporting technical evidence before us that leads us to consider that the measures proposed would not offer adequate mitigation. Furthermore, we note the Applicant's commitment to ongoing dialogue and the refinement or addition of mitigation measures where appropriate.
- 8.5.95. On balance, we are content that the proposed mitigation is a satisfactory response and we welcome the Applicant's commitment for ongoing and timely dialogue with the family.

Conclusions on Socio-Economic Effects

- 8.5.96. The matter of socio-economics was a significant consideration in the Examination, generating many representations. Through both initial written questions, further written questions and discussion during Issue Specific Hearings, we sought to query and clarify various aspects of the assessment of the socio-economic effects of the Proposed Development as set out in the ES [APP-043] and [APP-047].
- 8.5.97. The concerns raised by a number of individuals in respect of the EIA methodology have been examined. However, we find that the Applicant has adopted a generally robust, consistent, reasonable and proportionate approach to the assessment of the socio-economic implications of the Proposed Development.
- 8.5.98. Accordingly, taking all relevant documents and policies into account, we conclude that:
- the Applicant has considered all relevant, potential socio-economic impacts and the Proposed Development is therefore compliant with NPS EN-1 paragraphs 5.12.1 to 5.12.8;
 - appropriate construction mitigation measures would be secured through the outline PRWMP in the outline CTMP [REP7-021] and the Proposed Development is therefore compliant with NPS EN-1 paragraph 5.10.24;
 - in terms of local employment opportunities, only minor economic benefits would be generated by the Proposed Development;
 - the impact on the tourism economy would be minimal and reversible;
 - following the implementation of the mitigation measures in the outline CTMP, the potential for any inequality and discrimination would be minimised;
 - the Proposed Development would harm the recreational experience of users of PRowS ZR484, ZR485, ZR488, CW55 and NCN 1 during operation; and

- the Proposed Development accords with relevant local plan policy in respect of safeguarding tourism and providing some localised employment opportunities.

8.5.99. Overall, in terms of socio-economic effects, we find limited harm as a result of the loss of amenity to local PRoWs. This is carried into the final planning balance.

8.6. WATER ENVIRONMENT

Introduction

8.6.1. This section addresses the likely effects of the Proposed Development on the water environment. It particularly looks at issues around coastal change in the context of the applicable Flood and Coastal Erosion Risk Management Strategy, water quality and flood risk.

Policy Considerations

National Policy Statements (NPSs)

8.6.2. NPS EN-1 notes that applications should set out the impact of the proposed project on water quality, water resources, the water environment, water bodies and protected areas. There is a need to consider whether the proposal has regard to the requirements of the Water Framework Directive (WFD) and The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017.

8.6.3. In accordance with NPS EN-1, the extent and location of the Proposed Development means that a Flood Risk Assessment (FRA) is necessary to consider the risk of flooding arising from the project in addition to the risk of flooding to the project, taking into account climate change. Evidence of flood resilience and resistance is required.

8.6.4. Given the coastal location and topography of the Proposed Development Site and the future coastal management proposals set out in the Medway Estuary and Swale Flood and Coastal Erosion Risk Management Strategy (MEASS) [REP7-038] to [REP7-071], the coastal change section of NPS EN-1 is also relevant. Decisions must be based on an understanding of coastal change and the associated risks over the planned lifetime of the project, and consideration of how these are to be managed.

National Planning Policy Framework (NPPF)

8.6.5. Chapter 14 of the NPPF, under the sub-heading 'Planning and flood risk', seeks to avoid inappropriate development in areas at risk of flooding. Where development is necessary in such areas, the development should be made resilient for its lifetime without increasing flood risk elsewhere.

8.6.6. Chapter 14 of the NPPF, under the sub-heading 'Coastal change', explains that in coastal areas, planning decisions should take account of the UK Marine Policy Statement and marine plans. Development in a Coastal Change Management Area will be appropriate only where a number of criteria are met including:

- the development will be safe over its planned lifetime and not have an unacceptable impact on coastal change;
- the character of the coast including designations is not compromised; and
- the development provides wider sustainability benefits.

8.6.7. In addition, the planned lifetime of a development should be limited, with associated site restoration, where this is necessary to reduce a potentially unacceptable level of future risk to people and the development.

The Development Plan

8.6.8. Given the relevance and importance of the development plan, the following policies are also considered pertinent:

8.6.9. Bearing Fruits 2031: The Swale Borough Local Plan, adopted July 2017 (The Swale Borough Local Plan);

- Policy DM 21 – Water, Flooding and Drainage;
- Policy DM 22 – The Coast; and
- Policy DM 23 – Coastal Change Management.

8.6.10. In summary, these policies require consideration of assessing and managing flood risk, the protection of the water environment and an understanding of coastal processes and coastal change management.

8.6.11. Canterbury District Local Plan, adopted July 2017;

- Policy CC4 – Flood Risk;
- Policy CC5 – Flood Zones; and
- Policy CC11 – Sustainable Drainage Systems.

8.6.12. These policies reflect the FRA, resilience and flood risk management aspects of NPS EN-1.

Other policy

8.6.13. At the time of submission of the DCO Application, the MEASS was in consultation form and was subsequently adopted prior to the close of the Examination¹⁵. It sets out an approach to managing flood and coastal erosion risk in the region over the next 100 years and includes a specific proposal for future managed realignment at Cleve Hill (MEASS benefit area BA6.2) to compensate for coastal squeeze affecting European sites in the Strategy area. As this managed retreat proposal would affect a large proportion of the Proposed Development Site, the timing and interrelationship between this and the Proposed Development became an issue in the Examination.

¹⁵ <https://www.gov.uk/government/publications/medway-estuary-and-swale-flood-and-coastal-risk-management-strategy/medway-estuary-and-swale-flood-and-coastal-risk-management-strategy>

- 8.6.14. The construction of the Proposed Development will require an Environmental Permit for flood risk activities from the Environment Agency under the Environmental Permitting (England and Wales) Regulations 2016, as well as land drainage consent from the Lower Medway Internal Drainage Board and ordinary watercourse consent from Kent County Council as lead local flood authority. The policies associated with these are therefore relevant considerations.

The Applicant's Case

- 8.6.15. The principal Application documents relating to the water environment were:
- [APP-010]: Water Bodies in a River Basin Management Plan;
 - [APP-040]: Environmental Statement - Hydrology, Hydrogeology, Flood Risk and Ground Conditions Chapter;
 - [APP-057]: Environmental Statement - Hydrology figures associated with Cleve Hill Solar Park ES;
 - [APP-205]: Environmental Statement - Outline Construction and Environmental Management Plan (CEMP); and
 - [APP-227]: Environmental Statement - Flood Risk Assessment.

Water quality and hydrology

- 8.6.16. Chapter 10 of the Environmental Statement (ES) [APP-040] and [APP-057] identified the likely effects of the Proposed Development on the water environment. It assumed that 'embedded measures' such as normal good construction site practice could be treated as part of the development. The outline Construction Environmental Management Plan (CEMP) [APP-205] provided with the Application included a high-level overview of some pollution prevention and other measures that would be considered by the Applicant to mitigate any potential effects on water quality and water resources, and guidance that would be followed, such as the archived Environment Agency Pollution Prevention Guidance. This would provide a starting point for the full CEMP to be approved at discharge of Requirements by the local planning authority.
- 8.6.17. With these measures in place and the full CEMP implemented, the ES found no significant adverse effects, alone or in-combination, on water quality, hydrology, hydrogeology or flood risk. In response to our question ExQ2.5.3, the Applicant provided further detail of 'embedded' and other mitigation measures in successive iterations of the outline CEMP and clarified the pollution control measures and incident response actions that were intended to be included in the final CEMP. These were drawn out into a more detailed Mitigation Route Map submitted into the Examination [REP6-013] with the final version submitted at Deadline 7 [REP7-025]. The final version of the outline CEMP at those close of Examination was [REP7-015].
- 8.6.18. The Applicant drew attention to the potential improvement in surface water quality as a result of the proposed change in land use, including the site drainage ditch system that flows into The Swale SPA and Ramsar site. It provided evidence [REP4-050] to demonstrate the expected

reduction in pesticide and fertiliser use. During the Examination, the Applicant revised the proposals for routine manuring of the Arable Reversion Habitat Management Area [REP4-008] to exclude application within 10m of drainage ditches, in line with Defra best practice guidance.

Flood risk and climate change resilience

- 8.6.19. The FRA [APP-227] noted that the Proposed Development Site lies in Flood Zone 3a, and comprises land assessed as having a 1 in 100 (>1%) annual probability of river flooding or a 1 in 200 (0.5%) annual probability of sea flooding. However, the site benefits from existing flood defences in the form of a raised embankment surmounted in places by a concrete wall. The FRA stated that this would protect the Proposed Development Site from tidal flooding up to the 1 in 1,000-year event (using UK Climate Projections (UKCP) 2009).
- 8.6.20. The Applicant seeks powers through the DCO to take on the maintenance of these existing coastal defences, as the Environment Agency stated during pre-application consultation that it would cease to undertake such maintenance if the Proposed Development went ahead.
- 8.6.21. We were told that the design of the Proposed Development also takes into account the possibility of a breach or wave-overtopping of the existing coastal defences. The critical infrastructure (substation and battery energy storage area) would be located within a proposed additional flood protection bund. A 300mm freeboard was added to the modelled maximum flood level of 5.016m AOD when this was designed.
- 8.6.22. Elsewhere, the solar arrays, cabling, inverters and transformers situated around the Proposed Development Site have been designed to be resilient to a 1 in 1,000-year wave overtopping event. Potential flood depths were modelled for each of the fields, and the height of the bottom edge of the solar PV panels would be set at that level plus a freeboard of 300mm; all cabling and other electrical equipment associated with the panels would also be set above that level. The transformers distributed around the solar PV array fields would be mounted on floating platforms with cabling coiled beneath, enabling them to rise and fall with flood waters.
- 8.6.23. With these design measures, the FRA considered the residual risk of the Proposed Development flooding from tidal sources to be low.
- 8.6.24. The FRA concluded a negligible risk of flooding from fluvial, pluvial or groundwater sources, and it found no significant impacts on any floodplain from the Proposed Development.
- 8.6.25. The FRA applied the sequential and exception tests required by NPS EN-1 and NPPF to the Proposed Development, and concluded that it passed both, given the stringent site selection criteria that were applied (that it can be defined as essential infrastructure, that it is a highly sustainable development and that it does not increase the likelihood of flooding).

- 8.6.26. We explored whether the climate change predictions used in the assessment should be updated to take account of UKCP18, which was published following the Applicant's EIA. The Applicant considered the assessment to remain robust, quoting advice from Environment Agency [REP2-006], and in response to our written question, the Environment Agency confirmed [REP2-071] that appropriate data were used to support the submitted FRA and that it did not need updating. The Applicant submitted a clarification note to explain its position following the publication of UKCP18 [REP2-043].
- 8.6.27. We accepted an additional submission from the Applicant, entitled '*Position paper - Flood Defence Works and Consents, August 2018*' [AS-010], that sets out its joint position with the Environment Agency with regards to the ongoing maintenance of the existing coastal flood defences should the Proposed Development go ahead. It explained why the Applicant would require the powers and rights to carry out works to the existing defences to protect the Proposed Development during its operational phase. It also explained the situation at that time in relation to marine licensing for the elements of the defences below mean high water at spring tides (MHWS) and defined the 'maintenance activities' referred to in the Outline Design Principles and dDCO.
- 8.6.28. There was no assessment of likely significant effects from the ongoing maintenance of the existing coastal defences in the ES. This was questioned by the MMO in its RR [RR-816]. We are content with the Applicant's explanation [APP-035] that there would be no change to the baseline situation, so assessment was unnecessary, and that if more extensive works were to be required in future, these would be subject to separate consents and EIA, if necessary.

Coastal change

- 8.6.29. Chapter 10 of the ES [APP-040] considered the scenarios included in the consultation version of the MEASS. It set out the Applicant's consultation with the Environment Agency over the MEASS proposals for managed retreat at the site and noted that the Environment Agency accounted for the potential presence of the Proposed Development in its finalisation of the MEASS following consultation.

Planning Issues

Relevant Representations

- 8.6.30. Flooding and coastal defence issues and concerns about the responsibility for maintenance of the existing coastal defences passing from the Environment Agency to the Applicant were included in many RRs.
- 8.6.31. In its RR [RR-507], the Environment Agency noted the strategic value of the Proposed Development Site to the MEASS, which was at that time awaiting ratification by Defra. The Environment Agency explained that the MEASS aims to provide flood protection to some 17,000 homes in the area over its 100-year life, while the associated HRA concludes a need to create 535ha of compensatory intertidal habitat. The Environment

Agency's analysis highlighted Cleve Hill as one of eight sites that would collectively meet this obligation. The Environment Agency further referred to discussions with the Applicant that suggested that the lifetime of the solar park would be 40 years and confirmed that the proposed delivery programme in the MEASS had been adjusted to delay managed realignment at the Cleve Hill site to between 2039 and 2069.

- 8.6.32. The Environment Agency's RR also agreed that future maintenance of the existing coastal defences could be passed to the Applicant, concurred with the breach flood modelling undertaken to inform the FRA and expressed satisfaction that the flood mitigation measures included in the design of the site were suitable.
- 8.6.33. The Marine Management Organisation (MMO) was consulted following the Applicant's decision to include powers for the maintenance of the existing coastal defences in the dDCO, as a small proportion of the area involved lies below MHWS. Its RR [RR-816] advised against the Applicant's first option of transferring the exemptions to marine licensing currently available to the Environment Agency to the Applicant, but in principle supported the second option of a Deemed Marine Licence in the dDCO.
- 8.6.34. Subsequently, at Deadline 2, the Applicant confirmed that it would pursue a Deemed Marine Licence and deleted the version of Order draft Article 2 that sought exemption from marine licensing [REP2-003].
- 8.6.35. Agreement between the parties is reflected in the signed SoCG between the Applicant and the MMO [AS-028]. An amendment to the wording of Schedule 8, Condition 5(c) of the Deemed Marine Licence was subsequently agreed with the MMO (as evidenced in REP17-015]) and included in the final version of the Applicant's dDCO [REP17-003].

Local Impact Reports

- 8.6.36. In its Local Impact Report (LIR) [REP1-002], Canterbury City Council set out adopted policies and suggested that the key issue relating to the water environment was the impact of the Proposed Development on flood risk in the district.
- 8.6.37. In its role as lead local flood authority, Kent County Council noted in its LIR [REP1-004] that the Proposed Development could lead to an increase in flood risk elsewhere and highlighted the need for an effective mitigation strategy to deal with surface water runoff to avoid sedimentation of watercourses.

Other representations to the Examination

- 8.6.38. Disagreeing with the findings of the Applicant's FRA [APP-227], various IPs made further representations about the impact of the Proposed Development on the potential for flooding at the site, in Faversham and in Whitstable, and concerns continued to be raised about passing responsibility for the maintenance of the existing coastal flood defences to the Applicant (for example, CPRE Kent [REP2-066] and [REP5-040]).

- 8.6.39. Following the formal adoption of the MEASS, at Deadline 6 the Applicant submitted references from the document [REP6-015] that suggested that flood risk following managed realignment would increase at Faversham rather than decrease (MEASS, September 2019, Appendix I - Medway and Swale Strategy Study (MEASS) Modelling Report (Mott MacDonald March 2018), as illustrated on Figure 140 of the document). The MEASS with its Appendices was submitted into the Examination by the Applicant for Deadline 7 [REP7-039] to [REP7-071], along with the Applicant's further review of the relevant sections for the Proposed Development [REP7-038].
- 8.6.40. There were also representations about the opportunity cost of cancelling or delaying the MEASS proposal for managed retreat at the site in relation to flood relief, carbon sequestration and ecosystem services (for example CPRE Kent [REP2-067]). In response [REP3-025], the Applicant repeated data from the ES that conservatively predicted an offset of 59,000te CO₂ per annum as a result of the Proposed Development and added evidence this was some 35 times greater than the high estimate of CO₂ sequestration potential of managed retreat at Cleve Hill of 1,660te CO₂ per annum.
- 8.6.41. In a written submission [REP2-070], the Environment Agency confirmed its position on the flexibility of implementation of the MEASS. The Applicant reviewed the adopted MEASS and noted [REP5-015] that whilst the 'leading option' remained managed realignment at the Cleve Hill site from year 20, it set out a 'Plan B' in the event that the Proposed Development achieved consent and was constructed (MEASS, page 123 of Appendix H – Implementation Plan). Plan B allows for managed realignment at Cleve Hill in the longer term following the lifetime of the solar farm, and for earlier managed realignment in other parts of the strategy area such as Chetney Marsh.
- 8.6.42. In the absence of a fixed life in the original dDCO [APP-016], changes to the dDCO were agreed over the course of the Examination to potentially limit the Proposed Development to 40 years, should the proposals for managed realignment at Cleve Hill be ready for implementation at that time. A suitable Requirement (16) was drafted and iteratively improved to the ultimate satisfaction of the Environment Agency [REP4-061], culminating in draft Requirement 17 of the final version of the Applicant's dDCO [REP17-003].
- 8.6.43. In our Written Questions (ExQ1.4.23, [PD-004]), we asked the Environment Agency if the Applicant's proposed decommissioning plan would leave the site in a suitable condition for managed retreat. The Environment Agency confirmed this was the case in its response [REP2-071].
- 8.6.44. Following up on Kent County Council's LIR concerns about local concentrations of rainfall dripping from solar PV panels [REP1-004], the Applicant provided topographical information [REP6-020] that demonstrated the very flat nature of the site and indicated that 'rilling' would not be a problem. There was subsequent agreement on this

conclusion between the two parties in their SoCG submitted for Deadline 7 [REP7-029].

- 8.6.45. Representations were made by some IPs about contamination of the water environment through leakage of chemicals from damaged solar panels and energy storage batteries (for example, [REP5-034]). The Applicant provided evidence to support its response that this would not result in any likely significant effects in [REP5-024] and [REP5-011] respectively, the latter following up evidence provided orally at ISH6 by representatives of energy storage battery experts, Leclanché. Following these discussions at ISH6, the Applicant provided an amended outline Battery Safety Management Plan [REP6-021] that included reference to understanding and managing potential contamination problems. The final Plan can be secured through the relevant dDCO Requirement (3).
- 8.6.46. Noting the absence of a specific conclusion on the WFD in the Application documents, our written question ExQ1.10.10 [PD-004] asked the Applicant and the Environment Agency to comment. The Applicant noted that all effects on the water environment had been assessed as negligible in the ES, demonstrating the Proposed Development's compliance with the requirements of the WFD [REP2-006]; the Environment Agency stated that it had no concerns from a WFD perspective providing installation, use and decommissioning of the site was conducted in a responsible manner [REP2-071].

ExA Response

WFD compliance

- 8.6.47. In the light of the Environment Agency's statement of no concern from a WFD perspective and as all effects on the water environment were assessed as negligible in the ES, we are content that the Proposed Development complies with the requirements of the Water Framework Directive, The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 and NPS EN-1, contingent on all of the necessary mitigation measures set out in the ES and Mitigation Route Map [REP7-025] being secured through the final CEMP and Requirement 11 of the Recommended DCO.

Flood risk

- 8.6.48. We are satisfied that an appropriate FRA that meets the requirements of NPS EN-1 has been carried out: entry EA-9 of the signed SoCG between the Applicant and the Environment Agency [AS-017] supports this. While the Proposed Development Site is located in Flood Zone 3a, we note that the Applicant has included measures to ensure continued protection against tidal flooding, and that the vulnerable infrastructure has been designed with an appropriate level of flood resilience and resistance. We consider the Applicant's sequential and exception tests to be robust in the context of the stringent site selection criteria that it set for a development of this scale and nature.

8.6.49. We are conscious of the legitimate concerns about flooding held by many local residents, especially in Faversham and Whitstable. However, evidence put forward by the Applicant and the Environment Agency has reassured us that the Proposed Development does not present a material risk of increased flood risk to these towns, and that the representations from IPs about the opportunity cost in flood risk terms of delaying the implementation of managed realignment at Cleve Hill are based on misconception. The primary aim of the MEASS managed retreat proposal is to provide compensatory intertidal habitat to deal with coastal squeeze and the consequential MEASS HRA issues, not reducing flood risk, which would need to be dealt with through other measures.

Coastal change and management

8.6.50. The Applicant has engaged with the Environment Agency over the proposed management of coastal change in the area. The dDCO incorporates agreed measures to manage coastal defences in the short term, and a compromise has been agreed between the parties that would permit the Proposed Development to operate for 40 years without detriment to the coastal erosion risk management strategy that would be implemented in the medium to longer term. As such, we believe that the management of coastal change and the associated risks have been adequately addressed.

Impact on the water environment

8.6.51. The ES provides an assessment of potential hydrological and water quality impacts, and the outline CEMP [REP7-015] (the final version of which can be secured through DCO Requirement 11) sets out measures to mitigate pollution risk during construction. These, together with the supplementary information and improvements provided over the course of the Examination, left only two principal areas of concern.

8.6.52. The first, potential contamination from damaged batteries and solar panels, was addressed by the Applicant with support from an industry leading specialist company, Leclanché.

8.6.53. The second related to possible sediment pollution as a result of local concentrations of run-off from the solar arrays after rainfall ('rilling'). Evidence provided by the Applicant in relation to the flat topography [REP6-020] and the mitigating effect of the sown vegetation cover [APP-204] addressed these concerns to the satisfaction of Kent County Council, as evidenced in the SoCG [REP7-029].

8.6.54. We are content that construction contamination risks have been identified and would be appropriately managed. With the proposed controls in the final CEMP and operational management plans secured through the relevant Requirement of the Recommended DCO, we are satisfied that the Proposed Development will not have a significant adverse effect on water quality, water resources, water bodies or the wider water environment. Indeed, we are persuaded by the Applicant's suggestion that water quality is likely to improve locally as a result of less intensive agricultural inputs [REP4-050].

Conclusions on Water Environment

- 8.6.55. Taking all relevant documents and policies into account, we conclude that, subject to the implementation in full of the relevant measures identified in the construction, operational and decommissioning management plans, as summarised in the Mitigation Route Map [REP7-025]:
- the Proposed Development is compliant with the WFD;
 - the Proposed Development is policy compliant in relation to flood risk;
 - the management of coastal change and associated risks have been adequately addressed; and
 - the construction, operational and decommissioning impacts and risks to the water environment have been addressed and the overall effect of the Proposed Development on water quality is likely to be slightly positive: we consider this to be a neutral factor in our subsequent planning balance.

8.7. SAFETY AND SECURITY

Policy Considerations

National Policy Statements (NPSs)

- 8.7.1. The NPSs are silent on battery energy storage systems.

The Development Plan

- 8.7.2. No relevant development plan policies have been drawn to our attention.

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

- 8.7.3. The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended) under Regulation 5, part 4 states that:

The significant effects to be identified, described and assessed include, where relevant, the expected significant effects arising from the vulnerability of the proposed development to major accidents or disasters that are relevant to that development'.

The Applicant's Case

- 8.7.4. The principal Application document of relevance was:
- [APP-047]: Environmental Statement – Miscellaneous Issues Chapter.
- 8.7.5. Documents subsequently submitted into the Examination by the Applicant relating to battery energy storage included:
- [AS-009]: the Applicant's responses to Relevant Representations (RRs);
 - [REP3-021]: written representation on Electrical Safety Regulations and Standards;

- [REP4-051]: written representation - Air Quality Assessment - Battery Fire;
- [REP4-028]: the Applicant's responses to ExQ2 - Appendix 8 - Kent Fire and Rescue Service Meeting Notes - 20 August 2019;
- [REP4-032]: the Applicant's responses to ExQ2 - Appendix 12 – Allianz Risk Consulting - Tech Talk Volume 26: Battery Energy Storage Systems (BESS) Using Li-ion Batteries;
- [REP5-011]: the Applicant's written summaries of oral submissions ISH6 – Environmental Matters; and
- [REP6-021]: Outline Battery Safety Management Plan.

8.7.6. Chapter 17 of the ES [APP-047] recorded that the Proposed Development was not considered likely to cause a significant accident or disaster risk during either the construction or operational phases. However, it acknowledged that:

'there is a potential fire risk associated with certain types of batteries such as lithium-ion, although the facility includes cooling systems which are designed to regulate temperatures to within safe conditions to minimise the risk of fire'.

8.7.7. The ES [APP-047] stated:

'fire detection and suppression features could be installed to detect (e.g. multispectrum infrared flame detectors) and suppress fire (e.g. water base suppression systems) to minimise the effect of any fire. The Development design will include adequate separation between battery banks to ensure that an isolated fire would not become widespread and lead to a major incident'.

8.7.8. In terms of the security of the Proposed Development Site, the ES [APP-047] confirmed that it would be protected by a perimeter fence, closed circuit television, selective use of lighting with sensors and restriction of access to authorised personnel.

8.7.9. The Applicant [AS-009] responded to the RRs by reference to Chapter 17 of the ES [APP-047] and as follows:

- the site operator would ensure that emergency procedures are implemented in consultation with the relevant authorities;
- emergency access arrangements through the protective bund surrounding the battery energy storage system compound would be arranged by the site operator; and
- any waste classified as hazardous waste generated on-site would be controlled by The Hazardous Waste (England and Wales) Regulations 2005.

8.7.10. The Applicant's response [REP3-021] to representations at OFH2 about the alleged risks of battery energy storage systems set out relevant legislation, regulations and standards applicable to such projects.

8.7.11. Further, in light of discussions at ISH2 on the dDCO on how safety measures might be secured, the Applicant's subsequent outline Battery Safety Management Plan [REP6-021] confirmed:

'..... that safety risks related to the Battery Energy Storage System ('BESS') are understood, accounted for and mitigated as far as practicable, in agreement with relevant consultees, and in supplement to the Outline Design Principles document to form the basis for the decision of the relevant local planning authority ('LPA') to discharge Requirement 3' [of the dDCO].

- 8.7.12. The outline Battery Safety Management Plan had been reviewed by the HSE, with comments received incorporated in the document. A review by Kent Fire and Rescue Service¹⁶, following initial discussion [REP4-028] had also been undertaken which stated:

'Whilst we are not a statutory consultee in relation to this project we will continue to work and engage as this project develops to ensure that Cleve Hill Solar Park Ltd comply with the statutory responsibilities that we enforce.

All risk reduction strategies start with prevention and it is the 'responsible person' for the premises that has responsibility for this as stated in the Regulatory Reform (Fire Safety) Order 2005. We would also expect that our Central Consultation Team (CCT) will become more involved as the appropriate planning applications are submitted and that any applications would conform to any legislation that relates to this type of development and the design of the BESS will reflect prevailing legislative requirements and UK industry recommendations.

Kent Fire and Rescue Service (KFRS) recognises the use of batteries (including lithium-ion) as Energy Storage Systems is a new and emerging practice in the global renewable energy sector. As with all new and emerging practices within UK industry the KFRS would like to work with the developers to better understand any risks that may be posed and develop strategies and procedures to mitigate these risks.

The responses to the ARC [Allianz Risk Consulting] recommendations set out in the OSMP [outline Safety Management Plan] details the information that we would expect to be provided during the planning application phase, we would then be working with our CCT and Water Services colleagues during the consultation phase to make sure that the Cleve Hill Solar Park conforms to the appropriate legislation and recommendations.'

- 8.7.13. The Applicant's Air Quality Impact Assessment [REP4-051] responded to representations made by an IP, Dr Erasin, at OFH2, and his more detailed assessment report that had been published in the Faversham News ([REP4-051], Appendix B). The Applicant found the following limitations in Dr Erasin's assessment:

- control measures to eliminate or restrict a fire and its consequences were not accounted for;
- the exposure limit used was 1,333 times lower than the limit recommended in Public Health England guidance;

¹⁶ Kent Fire and Rescue Service has responsibility for responding in the locality of the Proposed Development Site

- the estimated total emission was three times more than the realistic worst-case scenario (assuming the fire suppression system failed, and a fire was allowed to propagate); and
- Dr Erasin's modelled release of hydrogen fluoride was 75 times his estimated maximum with no explanation of the inconsistency.

8.7.14. The Applicant [REP4-051] concluded that Dr Erasin's modelling had led to a substantial over-estimation of potential impacts, in the event of the unlikely scenario of a failure of the fire detection and suppression system, and a lack of emergency response within an hour.

8.7.15. By contrast, the Applicant's modelling [REP4-051], based on data provided by Leclanché¹⁷, had shown that the worst-case concentrations of hydrogen fluoride at the nearest residential properties (some 200m due south of the battery energy storage system compound) would be approximately 5% of the relevant Acute Exposure Guideline Level.

8.7.16. This guideline is the level above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic non-sensory effects. However, such effects were not disabling and were transient and reversible upon cessation of exposure.

Planning Issues

Relevant Representations

8.7.17. The RRs included a range of comments on safety concerns associated with energy storage, including: dangers to local residents arising from the potential for major incidents; risk of fire; and potentially hazardous waste arising from the disposal of end of life batteries.

8.7.18. By way of example, Faversham Town Council [RR-274] expressed concern about battery storage as an emerging technology and the lack of clarity in the Application.

8.7.19. The Faversham Society [RR-486] recorded strong objections:

- the safety of batteries has not been adequately addressed;
- such a large installation has no track record in the UK;
- lithium-ion batteries can catch fire and explode;
- it is not clear who would be responsible for assessing the safety of the installation; and
- uncertainty about access arrangements for emergency vehicles and the replacement of the batteries as the shortest-life components.

8.7.20. GREAT [RR-770] also drew attention to battery explosion, fire risk and potential terrorism activity.

¹⁷ Consulted by the Applicant as '*a world leading provider and manufacturer of high-quality energy solutions, principally based on lithium-ion cell technologies.*'

Local Impact Reports

8.7.21. The Local Impact Reports were silent on potential safety implications.

Other representations to the Examination

8.7.22. At OFH2, we heard further representations on behalf of The Faversham Society, who subsequently requested an ISH on batteries and related technology. Supplementary points raised, as augmented by the additional submission for Deadline 3 [REP3-071], included:

- the lack of any National Policy Statements or guidance on energy storage;
- The HSE had established a battery safety and energy storage test facility and a shared research programme – no results had been published;
- Allianz Risk Consulting guidance indicated ‘BESS using lithium-ion batteries are susceptible to thermal runaway and have been involved in several serious fires in the last few years.’
- significant and expensive battery fires had occurred in Hawaii, Arizona, Wisconsin and Belgium (where fire detection and suppression equipment had failed to contain the fire) and the causes remained unknown;
- there were currently no formal guidelines for the protection of battery energy storage systems and knowledge gaps on fire behaviour; fire test data for large format batteries; limited incident data; no data on methods of thermal runaway protection; spacing of units and access for emergency services; and no guidance on post fire response and recovery procedure; and
- the Allianz document set out advice in relation to early consultation with the fire service; and guidance on: construction; location; materials; equipment; design; ventilation; temperature control; gas and smoke detection; fire protection and water supply; and maintenance - but neither the Application nor the dDCO contained any reference to these safety issues.

8.7.23. We also heard from Dr Erasin at OFH2, who provided a summary of his submissions by Deadline 3 [REP3-059]. His principal points were:

- technical studies showed that, in the event of fire, lithium-ion batteries release high concentrations of toxic and harmful hydrogen fluoride gas;
- in the absence of any information in the Application, it had been necessary for him to extrapolate emissions, derive a domestic exposure limit for hydrogen fluoride based on work exposure limits, and adopt a generic wind dispersion model;
- the expected hydrogen fluoride concentrations would exceed the derived domestic exposure limits by a factor of 2,444 (at a distance of 4.5km); a factor of 1,333 (at a distance of 7.8km); and a factor of 55 (at a distance of 10km);
- there would be a foreseeable and significant human health risk endangering the population at Seasalter, Graveney, Faversham and Whitstable; and

- a safety zone of at least 15km from any population should be adopted.
- 8.7.24. Dr Erasin [REP3-059] also pointed to an environmental risk from copper leachates from the batteries in the event of a catastrophic flood.
- 8.7.25. CPRE Kent [REP3-060] echoed the need for an ISH and concerns about the limited science and experience of battery energy storage systems and the risk of serious incidents occurring.
- 8.7.26. At OFH3, Dr Erasin [REP5-034] spoke about the likely costs of decommissioning the Proposed Development and estimated that the disposal cost for the batteries would be around £40m. He also repeated his earlier concerns about hydrogen fluoride emissions in the event of a fire and maintained his recommendation of a 15km exclusion zone from any population. He was also concerned that the Applicant might wish to use vanadium redox flow batteries, which he considered to be an unacceptable risk in view of their constituent components.
- 8.7.27. Following ISH6, GREAT made further representations [REP7-098] expressing concern about the Applicant's failure to ensure early engagement with Kent Fire and Rescue Service which had precluded its registration as an IP and subsequent contribution to the Examination.
- 8.7.28. From documents obtained by GREAT [REP7-098] through a Freedom of Information Request, we were told that some correspondence between the Applicant and Kent Fire and Rescue Service, and also with the HSE, had not been made available to the Examination.
- 8.7.29. Moreover, Kent Fire and Rescue Service had told Graveney and Goodnestone Parish Council ([REP7-098], Appendix D) that in the event of a fire a decision might be taken to allow a controlled burn strategy. GREAT's concern was that Kent Fire and Rescue Service had not been provided with sufficient information.
- 8.7.30. Further, GREAT [REP7-098] highlighted that the battery energy storage system would be some seven times larger than the current largest battery installation in a remote part of Australia, there is a greater risk of battery energy storage fires in coastal and mountain areas, waste batteries have been known to cause serious fires, and fires have occurred across the range of battery usage.
- 8.7.31. Faversham Town Council's Deadline 7 representation [REP7-073] expressed apprehension about the size of the battery energy storage system, fire risk and toxic gases, and insisted that independent expert advice be sought.
- 8.7.32. The Faversham Society also made further representations at Deadline 7 [REP7-090]. In addition to those issues raised above, it sought a Security Considerations Assessment if the Application for development consent were to be granted and considered that a final decision on whether the Proposed Development should proceed should not be taken until explicit information had been provided.

8.7.33. We exercised our discretion to accept a further submission from The Faversham Society [AS-061] shortly before the close of the Examination. This introduced the publication by the Arizona Regulator of the Commissioner's determination of the 2012 Flagstaff, Arizona battery energy storage system fire, and a more recent fire and explosion in Surprise, Arizona. The Faversham Society drew out a number of points from the Commissioner's conclusions:

- the manner in which fire can spread from one container to another contradicts the Applicant's assertion that multiple containers are no more of a fire hazard than a single container;
- a serious risk of large-scale explosion was identified as lithium-ion batteries were extremely volatile if they come into contact with water - in view of the scale of the Proposed Development, a fire would result in very severe and potentially catastrophic consequences;
- the Commissioner recommended that any large-scale battery energy storage system should be built in isolation as an explosion could potentially flatten buildings at some distance;
- the Commissioner's findings reinforced the concerns expressed by the local community during the Examination of the Proposed Development, and those of Dr Erasin, in relation to chemistries that included compounds which released hydrogen fluoride in the event of fire or explosion; and
- the Commissioner set down stringent requirements for the protection of fire-fighters, none of which had been acknowledged by the Applicant or by Kent Fire and Rescue Service.

8.7.34. The Faversham Society [AS-061] concluded:

'Given the absence of National Planning Statements on BESS, it is important that the Examination is guided by authoritative sources with experience of BESS projects. We would urge that the attached ACC Determination is the most thorough and up-to-date such source currently available.

This Determination by the Arizona State Commission clearly reinforces the view of the Faversham Society and others, expressed in evidence to the Examination, that the risks associated with Lithium-ion batteries are unacceptable at any scale and especially when close to habitation. It is clear that a proposal for a Battery Energy Storage System close to Faversham, which will be over five times the size of the current largest in the world, poses unparalleled risks and must be regarded as recklessly dangerous and totally unacceptable.'

8.7.35. In response, the Applicant [REP17-007] suggested that The Faversham Society's Additional Submission [AS-061] misrepresented the position in that The Faversham Society had relied on a single document from an ongoing investigation that had received further documents from a variety of parties including Tesla. Tesla's statement pointed out:

'Also, the NFPA 855 Energy Storage Standard, which is a new NFPA standard for the installation of energy storage systems, is in its final stages of development and is expected to be approved by the end of

2019. NFPA 855 is designed to mitigate hazards based upon various battery technologies and it imposes a high bar for safety based on historical precedent and documented technology safety claims.

To avoid future events like those that occurred the Commissioner should ensure that all new energy storage systems meet the requirements of the new NFPA 855 standard and the 2021 IFC code. These new codes and standards stipulate the use of ventilated detection, suppression, and other safety features which would have prevented [the Arizona] storage systems from being deployed as designed'.

- 8.7.36. The Applicant [REP17-007] confirmed that the NFPA 855 standard was included in the outline Battery Safety Management Plan [REP6-021]. This would provide a robust and deliverable mechanism for ensuring that the safety of the facility was designed into the proposals from the outset in consultation with the HSE and Kent Fire and Rescue Service and secured in Requirements 3 and 20 of the dDCO. It should also be noted that, in the latest Arizona fire, the battery modules themselves had not exploded.
- 8.7.37. The Applicant [REP17-007] affirmed that its air quality assessment was reliable. It also confirmed that suppression measures would be tailored to the specific selected technology and to the requirements of Kent Fire and Rescue Service.
- 8.7.38. Overall, the Applicant [REP17-007] disagreed that the material supplied by The Faversham Society [AS-061] was the most thorough and up-to-date source currently available. Further, it urged that it was of little relevance to the Proposed Development and greater weight should be given to the expertise and experience of Leclanché in battery energy storage systems. Moreover, the outline Battery Safety Management Plan [REP4-045] indicated that more detailed UK guidance was emerging and it was expected that the regulatory requirements would be more developed by the detailed design stage and the submissions of details to discharge Requirement 3 of the dDCO.
- 8.7.39. Finally, the response of the US Energy Storage Association to the Arizona Commissioner [REP17-007] summarised the wider context of the information submitted by The Faversham Society:

'According to Wood Mackenzie Power and Renewables, at the end of 2018, 1 gigawatt of battery-based energy storage projects were operational in the United States across more than 20 states. Nearly 95% of these systems use lithium-ion battery technology Grid battery energy storage systems are professionally designed and installed and are built to stringent safety standards with state-of-the art monitoring systems'.

ExA Response

Battery energy storage system safety

- 8.7.40. In light of the representations made, we decided to include the topic of battery safety in ISH6 on Environmental Matters [EV-023] and [REP5-011]. We heard from IPs, including those who had raised concerns

previously, the Applicant, and also from Leclanché. The Applicant explained that Leclanché's representatives appeared by invitation of the Applicant in an independent capacity, insofar as the company was not commercially or contractually linked to the Proposed Development, to answer questions concerning energy storage. Whilst we recognise Leclanché's field of expertise and the open manner in which our questions were answered, we do not regard their presence to be truly independent insofar as the company is a provider of energy storage systems.

- 8.7.41. It was clear to us that, from the starting point of the Applicant's limited information about battery energy storage [APP-047], the Examination process had already elicited a substantial amount of additional information. However, there was nothing to suggest that this had satisfied the legitimate concerns expressed by IPs.
- 8.7.42. We heard [REP5-011] that Leclanché had experience of installing battery energy storage systems in Central Europe and North America but not on a comparable scale to the Proposed Development. However, Leclanché stated, in general terms and without specific reference to the Proposed Development, that installations take the form of containerised modules with the same safety practices and mechanisms applied irrespective of scale. We were also assured that the safety distances between containers was calculated at design stage so as to prevent propagation in the event of a fire breaking out.
- 8.7.43. Leclanché informed us that it was aware of the reported fires affecting battery energy storage systems and also the content and recommendations of the Allianz report [REP4-032]. We were also advised that all of the fires had occurred in the construction phase of the battery energy storage system. As a consequence, lessons had been learned, designs had been improved, and it was anticipated that most governments would adopt the latest International Standards and those prescribed by Underwriters Laboratories.
- 8.7.44. In view of the apparent heightened risk of fire during the construction phase, we asked for clarification about how the fire prevention and protection measures would be incorporated and commissioned. We are reassured [REP5-011] that each unit would have a pre-installed system and it would be fully operational before the energisation of the batteries. Moreover, each module would be equipped with shock sensors, so that any damage during transit could be identified, and each battery would be tested for voltage and insulation integrity.
- 8.7.45. We also explored the ongoing protection of the battery energy storage facility and were advised [REP5-011] that the containers would have an enhanced external coating to reflect the site's coastal location. In addition, regular inspection would be undertaken to ensure that the units, and the equipment therein, remained safe over the operational life of the Proposed Development. Inspections could also be undertaken at the discretion of the Fire and Rescue Service and the HSE.

- 8.7.46. In response to our question about how possible battery leakage might be detected, we were told [REP5-011] that the energy management system would be able to sense leaks and instigate an automatic shutdown before consequential damage. We are content that any leakage occurring before detection would be small in scale, and confined within the affected container, and it would not pollute the outside ground.
- 8.7.47. The outline Battery Fire Safety Management Plan [REP4-045] sets out the minimum information to be included at detailed design stage and, in turn, in the application to discharge Requirement 3 of the Recommended DCO. It provides for the following:
- a statement of compliance with applicable legislation;
 - a detailed design drawing to show separation between modules and safe access for fire appliances;
 - a statement of design responses to fire risk explaining how the risk of fire spreading has been addressed in the design of the installation;
 - battery specification to include chemistry, size and format;
 - fire detection and suppression systems specifications;
 - standard operating procedures and guidelines providing for maintenance during operation and the replacement of battery modules;
 - installation and operation protocols to manage a fire during construction or during operation or decommissioning; and
 - any other information required by Kent Fire and Rescue Service.
- 8.7.48. In turn, Requirement 3 of the Recommended DCO requires the approval of a Battery Safety Management Plan (BSMP) which must, amongst other things, *'prescribe measures to facilitate safety during the construction, operation and decommissioning of Work No.2(a) including the transportation of new, used and replacement battery cells both to and from the authorised development'* and *'the relevant planning authority must consult with the Health and Safety Executive and Kent Fire and Rescue Service before determining an application for the approval of the BSMP'*.
- 8.7.49. Whilst some of the generic measures outlined during the examination of this issue are not expressly provided for in the above, we are satisfied that the outline Battery Fire Safety Management Plan, in expressing the minimum information required, does not preclude more detail being sought by the local planning authority or by Kent Fire and Rescue Service, should it be found to be necessary, when an application is submitted in accordance with Requirement 3 of the Recommended DCO.
- 8.7.50. In terms of the concerns about air quality and the risk of gaseous escape in the event of fire, we recognise that Dr Erasin [REP3-059] and [REP5-034] was at a comparative disadvantage in that his calculations are substantially based on extrapolation. As a consequence, we find material shortcomings in his assessment. Although we gave Dr Erasin the opportunity to respond to the Applicant's critique [REP4-051] of his methodology and conclusions, no further representations were made.

- 8.7.51. We believe that the Applicant's assessment [REP4-051] has the advantage of primary data, the use of industry standard software to model dispersion, and comparison with relevant thresholds. We are also satisfied that the Applicant's modelling is highly conservative, and it provides clear demonstration that there would be no material threat to health at the nearest residential properties, or in the wider locality, in the event of an outbreak of fire.
- 8.7.52. We have had careful regard to GREAT's Deadline 7 representations [REP7-098]. We are satisfied that engagement with Kent and Fire Rescue Service, albeit delayed, has provided vital understanding which the Applicant has used to inform the outline Battery Safety Management Plan.
- 8.7.53. Although Kent Fire and Rescue Service was too late to register as an IP, in the absence of a RR, it was advised [OD-004] that we had discretionary powers to allow a non-IP to submit a WR and also attend Hearings and speak. We are satisfied that Kent Fire and Rescue Service was not precluded from direct participation in the Examination.
- 8.7.54. Similarly, while we note the claim [REP7-098] that the Applicant has not provided us with all of the correspondence in its dealings with the HSE and Kent Fire and Rescue Service, we believe that we have a sufficient understanding of their individual positions at the close of the Examination.
- 8.7.55. In relation to GREAT's [REP7-098] concern about any fire being allowed to burn itself out, reference to the source letter from Kent Fire and Rescue Service ([REP7-098], Appendix D) confirms:
- 'In broad terms and prior to a decision relating to any on-site fire suppression systems, KFRS would extinguish a fire on the site by applying large volumes of water. Alternatively, if no life risk were present, then a controlled burn strategy may be considered and employed in order to try to minimise the possible environmental pollution that may be caused with fire water run-off.'*
- 8.7.56. Further, irrespective of GREAT's [REP7-098] concern about the inadequacy of information available to Kent Fire and Rescue Service, the same letter states:
- '..... KFRS has procedures in place for a response to incidents involving batteries whilst these procedures cover incidents involving any type of electrical storage battery they need to be considered alongside site specific risk information as such and in line with other industrial sites in Kent and Medway, KFRS would work with the site operators to ensure site specific information is available if an emergency occurs rest assured that our firecrews would deal with any such incident with the same level of skill and dedication that they bring to any incident regardless of size, risk or complexity.'*
- 8.7.57. Overall, if development consent is granted, further details of the proposed installation would need to be submitted to Swale Borough

Council and relevant consultees. We are thus satisfied that this process would secure all of the necessary information required by Kent Fire and Rescue Service, including access arrangements for fire appliances and access to water supplies, to ensure an appropriate response in the event of an incident occurring. Moreover, there is nothing to suggest that the service would be ill-equipped to deal with any incident as alleged by Faversham Town Council [REP7-073].

- 8.7.58. We understand the Applicant's [REP5-011] desire for flexibility in its eventual choice of battery storage energy system, particularly as battery energy technology is the subject of ongoing development and improvement. Whilst noting Dr Erasin's [REP5-034] concern about vanadium redox flow systems, we consider that it would be inappropriate for the Recommended DCO to restrict the eventual choice of technology.
- 8.7.59. In this regard, all of the processes, regulations and safety legislation, referred to above will have equal applicability irrespective of the composition of the battery storage energy system, and the onus would be on the Applicant to satisfy the appropriate authorities in seeking to discharge Requirement 3 in the Recommended DCO. In this regard both Kent Fire and Rescue Service and the Health and Safety Executive are named as parties which the local planning authority must consult before determining an application for the approval of the Battery Storage Management Plan.

Security

- 8.7.60. We have considered local concerns about the proposed security arrangements for the site which The Faversham Society [REP7-090] describe as derisory in relation to the risk of terrorism. The Applicant has confirmed [REP17-007] that it would not be in its interest for the site to be at risk of a terrorism or other security event that threatens its operation. We are satisfied that the measures proposed in the ES ([APP-047] Chapter 17, section 17.3.6) would act as a reasonable deterrent and it would be a matter for the Applicant or site operator to keep their effectiveness under review.
- 8.7.61. While we acknowledge that the fear of criminal activity is capable of being a material consideration, no party has provided tangible evidence to show that additional measures, over and above those proposed, are necessary.
- 8.7.62. On the matter of insurance, the Applicant informed ISH6 [REP5-011] that it was in negotiations with insurers, the level of public liability was to be determined, and construction would not commence without having insurance in place. We regard these to be commercial considerations and not material to the determination of the Application.

Finally, we note the guidance in NPS EN-1 on security considerations. This sets out the role of DECC (now BEIS) and the pre-application notification procedure for energy NSIPs which enables any national security implications to be identified and addressed. There is nothing

before us to indicate that the Proposed Development is considered to be potentially 'critical' infrastructure raising national security concerns.

Conclusions on safety and security

- 8.7.63. In essence, the sustained and robust representations concerning the safety of the battery energy storage system flow primarily from the scale of the Proposed Development, the uncertainties of an emerging technology, incidents leading to major fires, and the proximity of the local population. We well understand these concerns.
- 8.7.64. However, there is raft of legislation and guidance in place and regulatory bodies have a role to play in the design, regulation, approval and ongoing supervision of the battery energy storage system. The Battery Safety Management Plan secured by Requirement 3 of the Recommended DCO would be a component contributor.
- 8.7.65. Overall, we are confident that risk will be managed and mitigated through the safeguards and checks during final design, installation and thereafter in operation. It would be open to any of those approving bodies to seek independent expert advice at that stage, should they consider it necessary.
- 8.7.66. In terms of site security, whilst the measures proposed might be viewed as minimal, we have not been provided with any evidence to lead us to conclude that more stringent security measures are necessary and in any event site security is primarily a matter for the Applicant and operator to determine in consultation with other relevant agencies.
- 8.7.67. Having thoroughly examined public concerns about the safety and security of the battery energy storage system, we are satisfied that, by the close of the Examination, the Applicant has provided a sound and enforceable basis of managing and mitigating safety risk and there is no compelling evidence to the contrary.
- 8.7.68. Overall, we are content that the information and analysis provided to us satisfies the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 in respect of major accidents and disasters.
- 8.7.69. We find nothing of weight to carry into the overall planning balance.

8.8. EXA'S RESPONSE AND CONCLUSIONS ON OTHER IMPORTANT AND RELEVANT CONSIDERATIONS

- 8.8.1. Taking all other relevant submissions, documents and policies drawn to our attention into account, we are satisfied that no other matters have arisen which affect the identification in the preceding chapters and sections of this report of the planning matters that require to be balanced by the SoS or taken into account in the DCO decision.

9. FINDINGS AND CONCLUSIONS IN RELATION TO HABITATS REGULATIONS ASSESSMENT

9.1. INTRODUCTION

- 9.1.1. This chapter sets out our analysis, findings and conclusions in relation to the Habitats Regulations Assessment (HRA). This will assist the Secretary of State for Business, Energy and Industrial Strategy (the SoS) to perform the duties of a competent authority under the Habitats Regulations¹⁸.
- 9.1.2. Regulation 63 of the Habitats Regulations states that if a proposal is likely to have a significant effect on a European site¹⁹ (either alone or in combination with other plans or projects), then the competent authority must undertake an appropriate assessment of the implications for that site in view of its conservation objectives.
- 9.1.3. Consent for the Proposed Development may only be granted if, having assessed the effects of the Proposed Development on European sites, the competent authority's appropriate assessment concludes that the integrity of European sites would not be adversely affected, subject to Regulation 64, a consideration of overriding public interest.
- 9.1.4. Throughout the Examination process, we were mindful of the need to ensure that the SoS has the information that may reasonably be required to carry out the necessary duties as competent authority. We sought evidence from the Applicant and the relevant Interested Parties (IPs), including Natural England as the statutory nature conservation body, through our Written Questions (ExQ1) [PD-004], Further Written Questions (ExQ2) [PD-008], a Rule 17 request for further information [PD-009] and at Issue Specific Hearings (ISH) [EV-011 and EV-023].
- 9.1.5. We produced a Report on the Implications for European Sites (RIES) during the Examination, with support from the Planning Inspectorate's Environmental Services Team [PD-010]. The purpose of the RIES was to compile, document and signpost information provided in the DCO application and submitted by the Applicant and IPs during the Examination (up to and including Deadline 6). The RIES was issued to ensure that we had correctly understood HRA-related, factual information

¹⁸ The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations).

¹⁹ The term European sites in this context includes Sites of Community Importance (SCIs), Special Areas of Conservation (SACs) and candidate SACs (cSACs), Special Protection Areas (SPAs), possible SACs (pSACs), potential SPAs (pSPAs), Ramsar sites, proposed Ramsar sites, and any sites identified as compensatory measures for adverse effects on any of the above.

and the position of various parties, including Natural England, in relation to the potential effects of the Proposed Development on European sites.

- 9.1.6. The RIES was published on the Planning Inspectorate's website on 23 October 2019; the Applicant and IPs were notified of this. Consultation on the RIES took place between 23 October 2019 and 13 November 2019. The RIES was issued to ensure that IPs, including Natural England, had been consulted formally on Habitats Regulations matters. This process may be relied upon by the SoS for the purposes of Regulation 63(3) of the Habitats Regulations.
- 9.1.7. The Applicant [REP7-031], Natural England [REP7-109], Faversham and Swale East Branch Labour Party [REP7-089] and an IP, Mr Ledger [REP7-117], provided comments on the RIES. These comments were considered during the drafting of this chapter. Natural England's view was that the RIES sets out an accurate presentation of the advice it provided during the Examination [REP7-109].
- 9.1.8. The RIES is not updated following consultation.

9.2. PROJECT LOCATION

- 9.2.1. As described in Chapter 2 of this Report, the Proposed Development comprises the construction, operation, maintenance and decommissioning of a solar photovoltaic array with either an electrical storage facility or an extension to the solar photovoltaic array, together with connection infrastructure and other Associated Development. Both the solar photovoltaic array and the energy storage facility would have a capacity of greater than 50MW.
- 9.2.2. The location of the Proposed Development is approximately 2km north-east of Faversham and 5km west of Whitstable, on the north Kent coast.
- 9.2.3. As illustrated on the Applicant's Statutory and Non-Statutory Nature Conservation Designations Plan [APP-009], the northern, eastern and western extents of the Proposed Development Site include areas that are part of The Swale Special Protection Area (SPA) and Ramsar site. The boundaries of The Swale SPA and Ramsar site are coincident.

9.3. THE APPLICANT'S ASSESSMENT OF THE HRA IMPLICATIONS OF THE PROJECT

- 9.3.1. The Applicant concluded that there is potential for likely significant effects (LSE), either alone or in-combination with other plans or projects, on two European sites, namely The Swale SPA and The Swale Ramsar site.
- 9.3.2. The '*Report to Inform Appropriate Assessment*' (RIAA) (revision A, [APP-026]), concluded that there would be no adverse effect on the integrity (AEoI) of any European site, either alone or in-combination with other plans or projects [APP-026]. Accompanying screening and integrity matrices were provided in Appendices 7 and 8 of [APP-026] (duplicated in [APP-027]).

- 9.3.3. At Deadline 3, the Applicant provided revised screening and integrity matrices in response to ExQ1.1.22 [PD-004]. The revised matrices [REP3-023] superseded those provided in [APP-026] and [APP-027].
- 9.3.4. At Deadline 7, the Applicant submitted a revised RIAA (revision B, [REP7-011]), including revised matrices. This superseded the RIAA provided with the DCO application [APP-026] and the matrices provided in [REP3-023]. The revisions to the RIAA broadly comprised the following (the reasons for which are reported later in this chapter):
- consideration of potential for LSE on the Thanet Coast and Sandwich Bay Ramsar site, including provision of a screening matrix for this site;
 - description of mitigation for construction noise disturbance to birds roosting at Castle Coote;
 - consideration of whether the exclusion of fertiliser within 10m of ditches would have a material impact on calculations for the capacity of the proposed Arable Reversion Habitat Mitigation Area (AR HMA);
 - an update to the in-combination assessment; and
 - updates to the matrices to reflect additional evidence, revised documentation and areas of agreement with Natural England.
- 9.3.5. Unless otherwise stated, subsequent references to the RIAA in this chapter are to the updated version submitted at Deadline 7 (revision B, [REP7-011]).

9.4. EUROPEAN SITES AND THEIR QUALIFYING FEATURES

- 9.4.1. The Applicant's RIAA demonstrated that the Proposed Development is not connected with or necessary for the management for nature conservation of any European site [REP7-011]. This position is discussed further in section 9.6 of this chapter.
- 9.4.2. Section 5 of the RIAA [REP7-011] explained that the Applicant identified all European sites within 5km of the application site. Beyond this distance, the Applicant considered there was no pathway for effects on qualifying features of European sites of non-avian interest [REP7-011].
- 9.4.3. Noting that birds can be highly mobile, the Applicant also identified European sites within 10km of the Proposed Development Site that are designated for avian interest. The Applicant considered that birds originating from European sites beyond 10km were not likely to visit the Proposed Development Site or its adjacent habitats at a level of frequency where the effects of the Proposed Development would cause a material change in their ability to survive or reproduce [REP7-011 and APP-039]. Therefore, the Applicant considered that significant effects would not be likely to occur on European sites of avian interest located more than 10km from the Proposed Development Site [REP7-011] and [APP-039].
- 9.4.4. In the Applicant's signed pre-submission Statement of Common Ground (SoCG) with Natural England (Table 4, [APP-256]), it was agreed that the

5km and 10km search areas were appropriate. Points of agreement in the pre-submission SoCG between the Applicant and Natural England [APP-256] were deliberately not reproduced in the next iteration of the SoCG, submitted (unsigned) at Deadline 4 [REP4-039]. A final signed SoCG with Natural England was submitted as [AS-050], which superseded [REP4-039].

- 9.4.5. Table 2.1 of the RIES [PD-010] set out the European designated sites and qualifying features identified in revision A of the RIAA [APP-026] for consideration in the assessment.
- 9.4.6. As explained in paragraph 2.1.9 of the RIES [PD-010], the Applicant scoped out the Outer Thames Estuary SPA, Blean Complex Special Area of Conservation (SAC) and the Thanet Coast and Sandwich Bay SPA from further consideration within the RIAA, concluding that there would be no LSE on the qualifying features of these sites.
- 9.4.7. In paragraph 2.1.10 of the RIES [PD-010], we noted that the Thanet Coast and Sandwich Bay Ramsar site was shown on Figure 1 of the RIAA (revision A, [APP-026]) as covering the same area as the Thanet Coast and Sandwich Bay SPA. However, the Thanet Coast and Sandwich Bay Ramsar site was not identified in Table 1 of the RIAA (revision A, [APP-026]) as being potentially affected by the Proposed Development and no conclusion was presented in terms of potential for LSE on this site.
- 9.4.8. We assumed, when completing the RIES [PD-010], that the conclusions presented in the RIAA (revision A, [APP-026]) in respect to the Thanet Coast and Sandwich Bay SPA would also apply to the Ramsar site, as these sites cover the same geographical area. The Applicant confirmed this assumption to be correct in its response to the RIES [REP7-031]. The Applicant's revised RIAA submitted at Deadline 7 (revision B, [REP7-011]) added reference to Thanet Coast and Sandwich Bay Ramsar site to Table 1 and concluded that there would be no LSE on this site. It was explained that the Ramsar site was designated under Criterion 2 (for fifteen British Red Data Book wetland invertebrates) and Criterion 6 (for non-breeding ruddy turnstone) [REP7-011].
- 9.4.9. The assessment presented in the RIAA [REP7-011] therefore focused on potential impacts on two European sites, namely The Swale SPA and Ramsar site, for which potential LSE were identified. The signed SoCG between the Applicant and Natural England (Table 3, [AS-050]) confirmed that Natural England was satisfied that all other statutorily designated nature conservation sites could be screened out as not being significantly affected by the proposal.
- 9.4.10. The RIAA described the Proposed Development Site as including land that is functionally linked to The Swale SPA and Ramsar site, it being of importance to qualifying features and assemblage component species including dark-bellied brent goose (hereafter 'brent goose'), lapwing, golden plover and marsh harrier [REP7-011]. The assessment presented in the RIAA was conducted on this basis.

- 9.4.11. As reported in paragraphs 2.1.15 and 2.1.16 of the RIES [PD-010], Natural England confirmed that the Applicant had identified the correct qualifying features and assemblage component species of The Swale SPA and Ramsar site ([RR-826]; Table 4, [APP-256]; Table 3, [AS-050]; response to ExQ1.1.21, [REP2-096]).
- 9.4.12. No concerns were raised by IPs during the Examination in relation to the Applicant's identification of European sites or qualifying features.
- 9.4.13. Potential impacts on migratory bird species of The Swale SPA and Ramsar site which may occur as qualifying features (or assemblage component features) of Natura 2000 sites in other European Economic Area (EEA) States were considered by the Applicant [REP7-011]. No LSE on Natura 2000 sites in any other EEA State were identified [REP7-011]. No comments relating to Natura 2000 sites within another EEA State were received during the Examination.
- 9.4.14. We are satisfied that the Applicant correctly identified all the relevant European sites and qualifying features and interests for consideration in the RIAA.

9.5. HRA MATTERS CONSIDERED DURING THE EXAMINATION

- 9.5.1. The main HRA matters raised by the ExA, Natural England and other IPs and discussed during the Examination include:
- the scope of the Applicant's in-combination assessment;
 - the Applicant's conclusion that loss or change of habitats within The Swale SPA and Ramsar site would not result in a LSE;
 - the Applicant's conclusion that attraction of egg-laying invertebrates to solar panels would not result in a LSE on the invertebrate assemblage qualifying feature of The Swale Ramsar site;
 - the Applicant's 'bird day' calculations;
 - the Applicant's approach to assessing and mitigating impacts of habitat loss or change on brent goose, lapwing and golden plover, including the proposed AR HMA;
 - the Applicant's approach to assessing and mitigating impacts of habitat loss or change on marsh harrier, including the proposed Grazing Marsh Grassland Management Plan;
 - the content of the outline Landscape and Biodiversity Management Plan (LBMP);
 - the Applicant's approach to assessing and mitigating impacts of noise disturbance to birds, including the content of the outline Special Protection Area Construction Noise Management Plan (SPA CNMP) and the outline Breeding Bird Protection Plan (BBPP);
 - the Applicant's proposals for monitoring, triggers and an adaptive management approach;
 - impacts from hydrological changes and dust emissions and mitigation of such impacts; and
 - the Applicant's overall conclusion of no AEoI on the qualifying features of The Swale SPA and Ramsar site.

9.5.2. These matters are discussed in sections 9.6 and 9.8 of this chapter, as appropriate.

9.6. ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS (LSE)

The Applicant's Assessment

9.6.1. The Applicant's conclusions on the LSE of the Proposed Development alone are presented in Chapter 5 of the RIAA [REP7-011] and in the screening matrices (Appendix 7, [REP7-011]).

9.6.2. The Applicant has addressed potential in-combination effects in section 6.2 of the RIAA [REP7-011] and in the screening matrices (Appendix 7, [REP7-011]). The plans and projects considered in the in-combination assessment are set out in Table 7 of the RIAA [REP7-011]. In addition to the plans and projects identified in Table 7, the Applicant's revised RIAA submitted at Deadline 7 [REP7-011] considered the potential for in-combination effects with the Environment Agency's Medway Estuary and Swale Strategy (MEASS), as discussed further below.

9.6.3. In light of the European Court of Justice (ECJU) ruling in *'People Over Wind and Peter Sweetman v Coillte Teoranta'*, the Applicant confirmed in paragraph 19 of the RIAA [REP7-011] that mitigation measures had not been taken into account in determining LSE. This position was reiterated by the Applicant in [REP2-072].

9.6.4. The Applicant concluded that the Proposed Development would have no LSE, either alone or in-combination with other plans or projects, on the qualifying features of the Outer Thames Estuary SPA, the Blean Complex SAC, or the Thanet Coast and Sandwich Bay SPA and Ramsar site [REP7-011]. This conclusion was agreed with Natural England [RR-826] and [AS-050] and Kent Wildlife Trust [REP17-009]. No IPs disputed the Applicant's conclusion of no LSE on these European sites and their qualifying features during the Examination.

9.6.5. The Applicant concluded that the Proposed Development is likely to give rise to significant effects, either alone or in-combination with other plans or projects, on the qualifying features of The Swale SPA and Ramsar site [REP7-011].

Potential impacts

9.6.6. The Applicant considered the following potential impacts during construction, operation and decommissioning of the Proposed Development (as relevant) in the RIAA [REP7-011]:

- noise and visual disturbance;
- loss or change of habitats;
- habitat fragmentation;
- hydrological changes;
- deposition of dust;
- collision risk to birds;

- disturbance through changes in recreational access; and
- attraction of egg-laying invertebrates to solar panels.

- 9.6.7. Table 3 of the RIAA [REP7-011] and the screening matrices (Appendix 7, [REP7-011]) summarised the impacts for which a LSE on qualifying features of The Swale SPA and Ramsar site (from the Proposed Development alone) was identified. A LSE in-combination with other plans or projects on all qualifying features of The Swale SPA and Ramsar site was also identified, with the exception of the nationally scarce plants and invertebrate community designated under Ramsar Criterion 2 [REP7-011].
- 9.6.8. In response to ExQ1.1.19 [PD-004], the Applicant confirmed [REP2-006] that Table 3 of the RIAA (revision A, [APP-026]) should also have identified a LSE in respect of habitat loss or change during construction; this was a typographic error which was corrected in revision B of the RIAA [REP7-011]. The Applicant confirmed in answer to ExQ1.1.19 [REP2-006] that the assessment of effects on the integrity of The Swale SPA and Ramsar site arising from habitat loss or change during construction is presented in section 6.1.2 of the RIAA [REP7-011].
- 9.6.9. In its RR [RR-826], Natural England confirmed agreement with the conclusions presented in Table 3 of the RIAA and that all other potential impacts (including impacts during all phases resulting from habitat fragmentation, collision risk to birds, changes to recreational access, and the attraction of egg-laying invertebrates to solar panels) would not be likely to have a significant effect on The Swale SPA and Ramsar site.
- 9.6.10. Table 3.1 of the RIES [PD-010] summarised the impacts and qualifying features of The Swale SPA and Ramsar site for which the Applicant identified a potential LSE.
- 9.6.11. We are content that all potential impacts on European sites have been identified and assessed by the Applicant in the RIAA [REP7-011].

Scope of in-combination assessment

- 9.6.12. In their responses to ExQ1.5.11 [PD-004], Natural England, Kent County Council, Swale Borough Council and Canterbury City Council confirmed they were content that all plans and projects with potential to result in in-combination effects together with the Proposed Development had been identified and assessed by the Applicant in the RIAA ([REP2-096], [REP2-053], [REP2-056] and [REP2-048] respectively). The Marine Management Organisation (MMO) noted that Marine Licences granted to the London Array Offshore Wind Farm Export Cable Corridor or Southern Water had not been discussed by the Applicant but were of the view that these were unlikely to result in in-combination effects with the Proposed Development (ExQ1.5.11, [REP2-095]).
- 9.6.13. The Environmental Statement (ES) [APP-040] explained that the Proposed Development Site was located within an area of land proposed for managed re-alignment in the consultation draft of the Environment

Agency's MEASS²⁰. In its RR, the Environment Agency provided details of the MEASS proposals, explained that it understood the Proposed Development land use would be for a period of 40 years and that it had adjusted its proposals in the MEASS in response [RR-507]. The Environment Agency noted that there was no reference to a time limit in the Application and confirmed that *'The Strategy has been finalised and will be published shortly'* [RR-507].

- 9.6.14. The MEASS was not identified in Table 7 of the RIAA (revision A, [APP-026]) as a plan or project that may result in in-combination effects with the Proposed Development, which was noted by the Environment Agency in its signed SoCG with the Applicant (Table 2, [AS-017]). The SoCG [AS-017] sets out the Applicant's position that once the MEASS becomes adopted policy, it would update the in-combination assessment in the RIAA (revision A, [APP-026]) accordingly. It was confirmed that *'The EA agree that following the adoption of MEASS, the RIAA for the Development should be updated to refer to the findings of the HRA undertaken in respect of the MEASS'* [AS-017].
- 9.6.15. Through the SoCG, the Environment Agency confirmed that the 'with solar park scenario' applied in the MEASS assumed managed realignment in epoch 2 (2039 to 2069), following the cessation of operation of the Proposed Development [AS-017]. The Applicant subsequently added a new Requirement to the draft DCO (dDCO), which broadly sets out the role of the Applicant, Environment Agency and the local planning authority in relation to decommissioning (Requirement 17, [REP17-003]). In response to ExQ2.4.10 [PD-008], the Environment Agency confirmed it was satisfied with the wording of dDCO Requirement 16 (now 17) and that it was *'..... happy that it provides the appropriate level of flexibility and certainty'* to safeguard managed realignment at the Proposed Development Site [REP4-061]. As such, it appears that there would be no temporal overlap between the Proposed Development and the MEASS proposals for Cleve Hill.
- 9.6.16. At Deadline 5, the Applicant [REP5-001] noted that the MEASS had now been finalised and adopted by the Environment Agency²¹.
- 9.6.17. A copy of the MEASS documentation was submitted to the Examination by the Applicant at Deadline 7 [REP7-039] to [REP7-071]. The Applicant's Deadline 7 submissions considered the potential for AEoI of The Swale SPA and Ramsar site from the Proposed Development in-combination with the MEASS, as discussed in section 9.8 of this chapter.

²⁰ Environment Agency (2017) Medway Estuary and Swale Strategy [online] <https://consult.environmentagency.gov.uk/ksles/medway-estuary-and-swale-strategy/>

²¹ Environment Agency (2019) Medway Estuary and Swale Flood and Coastal Erosion Risk Management Strategy [online] <https://www.gov.uk/government/publications/medway-estuary-and-swale-flood-and-coastal-riskmanagement-strategy/medway-estuary-and-swale-flood-and-coastal-risk-management-strategy>

Examination

9.6.18. The Examination generally focussed on whether AEoI of the Swale SPA and Ramsar site could be ruled out. The Applicant's conclusions on LSE were not disputed by Natural England or other IPs. The following matters relating to the Applicant's assessment of LSE were discussed during the Examination.

Loss or change of habitats in The Swale SPA and Ramsar site

9.6.19. As described above, the northern, eastern and western extents of the Proposed Development Site include areas that are part of The Swale SPA and Ramsar site. Paragraph 74 of the RIAA [REP7-011] explained that these areas comprise:

- the existing coastal flood defences that protect the application site;
- the freshwater grazing marsh and associated habitats (managed by Kent Wildlife Trust) within the strip landward of the flood defences; and
- the freshwater grazing marsh at the eastern extent of the Proposed Development Site, between the proposed AR HMA and Seasalter Road (the proposed Freshwater Grazing Marsh Habitat Management Area (FGM HMA)) - this area relates to two units of the Swale Site of Special Scientific Interest (SSSI), S15 M Attwood Cleve Marsh (049) and Cleve Marsh West (063).

9.6.20. The RIAA stated that '*No development is proposed in these areas*' [REP7-011]. As part of the DCO application, the Applicant sought consent to undertake maintenance of the existing coastal flood defences (currently undertaken by the Environment Agency). The Applicant's position was that no specific flood defence works over and above those likely to be undertaken on an ongoing basis by the Environment Agency to maintain the current standard of protection are proposed [REP7-011]. For the purposes of the assessment presented in the RIAA, the Applicant assumed that there would be no change in the flood defence works over and above the future baseline [REP7-011].

9.6.21. The RIAA also stated [REP7-011] that '*no development*' is proposed in the freshwater grazing marsh at the eastern extent of the Proposed Development Site: its inclusion as part of the proposed development is to allow for enhanced management of this area (under the proposed FGM HMA, the management prescriptions for which are set out in Appendix K of the outline LBMP [REP7-013]).

9.6.22. In [AS-001], the Applicant clarified that whilst Work No.8 of the dDCO seeks consent for earthworks, means of access and drainage in the area covered by the proposed FGM HMA, this would be a continuation of the activities already undertaken under the existing baseline, with no additional activities proposed in this area. To maintain and manage water levels in the ditches, new water flow control structures may be installed, as illustrated on Figure A5.1 of the outline LBMP [REP7-013].

- 9.6.23. Paragraph 76 of the RIAA concluded that there would be no loss or change of habitat within The Swale SPA and Ramsar site and, therefore, no LSE on the qualifying features of the European sites in this regard [REP7-011]. This conclusion was not disputed by Natural England during the Examination. In [REP1-005], Swale Borough Council noted that '*..... no part of the solar park itself is proposed to be constructed within any of these designated areas, and there should therefore be no direct impact on these designated areas.*'
- 9.6.24. Noting the relationship between the existing coastal flood defences and The Swale SPA and Ramsar site, we asked the Applicant in ExQ1.1.18 to confirm the extent to which the maintenance of the existing coastal defence constitutes an action that is connected with or necessary to the management of those designated sites [PD-004].
- 9.6.25. The Applicant considered that the maintenance of the existing coastal defences is, in part, an action connected with or necessary to the management of The Swale SPA and Ramsar site, because its function is necessary to protect the freshwater components of the designated site from inundation by seawater [REP2-006].
- 9.6.26. Natural England [REP3-082] agreed that the sea wall does protect the freshwater habitat but noted that it also contributes to the loss of intertidal habitats through coastal squeeze. Therefore, Natural England's view [REP3-082] was that '*..... the maintenance of the sea wall does not need to be considered as necessary for the management of the [Swale SPA and Ramsar] site*', which it noted was consistent with Natural England's advice to the Environment Agency for its assessment of the MEASS under the Habitats Regulations.
- 9.6.27. Natural England explained it was content with the Applicant's confirmation that there would be no flood defence works over and above those likely to be undertaken on an ongoing basis by the Environment Agency [REP3-082]. Natural England considered that, as this current standard of protection had already been assessed through the HRA of the MEASS, and a strategic approach taken to address losses of intertidal habitat from coastal squeeze, it agreed with the Applicant's assessment in the RIAA that there would be no loss or change of SPA and Ramsar habitats as a result of the Proposed Development [REP3-082].
- 9.6.28. Natural England confirmed it was in agreement with the Applicant's conclusion that maintenance of the sea wall would not have a LSE on The Swale SPA and Ramsar site, as it would not result in any change in habitat over and above that already assessed through the MEASS [REP3-082].
- 9.6.29. The inclusion of parts of The Swale SPA and Ramsar site within the eastern extent of the Proposed Development Site to allow for enhanced management (under the proposed FGM HMA) has been welcomed by Natural England, '*..... as it gives the opportunity to manage this part of the designated site, and the AR HMA, together*' [RR-826].

Attraction of egg-laying invertebrates to solar panels

- 9.6.30. The potential for attraction of egg-laying invertebrates (which are part of the Swale Ramsar invertebrate community) to the proposed solar panels was a matter discussed during the Examination, as reported in paragraphs 3.2.13 to 3.2.16 of the RIES [PD-010].
- 9.6.31. Natural England confirmed it is in agreement with the Applicant's conclusion that invertebrate attraction to solar panels would not result in a LSE on the Swale Ramsar site [RR-826] and [REP3-082].

Our Findings in Relation to HRA Screening

- 9.6.32. Table 3.1 of the RIES [PD-010] summarises the European sites, qualifying features and potential impacts carried forward to Stage 2 of the HRA process, to establish if AEoI of these sites could be ruled out.
- 9.6.33. Having considered the information provided by the Applicant, together with the responses from Natural England and relevant IPs on the Applicant's screening conclusions, we are of the opinion that the Proposed Development is only likely to result in significant effects on The Swale SPA and Ramsar site and the qualifying features listed in Table 3.1 of the RIES [PD-010].
- 9.6.34. We recommend that the SoS can conclude no LSE on all other European sites and qualifying features, based on the information provided in the Applicant's RIAA [REP7-011] and submitted during the Examination (as detailed in the RIES, [PD-010]). This conclusion is supported by Natural England, as noted in its signed SoCG with the Applicant [AS-050].

9.7. CONSERVATION OBJECTIVES

- 9.7.1. Appendix 4 of the Applicant's RIAA [REP7-011] provides the conservation objectives for the Swale SPA (dated June 2014). These are reproduced in section 5.2.2 of the RIAA [REP7-011] and are as follows:

'Ensure that the integrity of the site is maintained or restored as appropriate, and ensure 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 population of each of the qualifying features, and,
- The distribution of the qualifying features within the site'.

- 9.7.2. In the Applicant's signed pre-submission SoCG with Natural England [APP-256], it is agreed that the conservation objectives for the Swale SPA have been correctly identified in section 5.2.2 of the RIAA.

- 9.7.3. We note that Natural England published an updated version of the conservation objectives document in February 2019²², subsequent to submission of the Application. We understand that the updated document reflects the consolidation of the Habitats Regulations in 2017 and does not materially change the conservation objectives of the Swale SPA. This position was set out in the RIES [PD-010], with no comments raised by Natural England or other IPs.
- 9.7.4. ExQ1.1.20 [PD-004] asked the Applicant to confirm whether The Swale SPA and Ramsar site are currently considered to be in favourable condition. The Applicant advised, with reference to Natural England Supplementary Advice on conservation objectives for The Swale SPA , that the breeding bird and wintering waterbird assemblage features are in unknown or good condition, with the exception of recreational disturbance (where there is evidence that human activities such as dog walking lead to bird disturbance) (ExQ1.1.20, [REP2-006]). The Applicant also explained that since classification of The Swale SPA and Ramsar site, 'alerts' for negative changes in abundance of waterbirds (based on data analysed by the British Trust for Ornithology) had been reported for European white-fronted goose, shelduck, shoveler, lapwing, grey plover and dunlin (ExQ1.1.20, [REP2-006]).

9.8. FINDINGS IN RELATION TO ADVERSE EFFECTS ON THE INTEGRITY (AEoI)

- 9.8.1. The Applicant considered the potential for AEoI of The Swale SPA and Ramsar site from the Proposed Development alone within section 6.1 of the RIAA [REP7-011] and in the integrity matrices (Appendix 8, [REP7-011]). Section 6.2 of the RIAA and the integrity matrices considered the potential for AEoI in-combination: the other plans and projects considered in the in-combination assessment are set out in Table 7 [REP7-011].
- 9.8.2. In addition to the plans and projects identified in Table 7, the Applicant updated its in-combination assessment in the RIAA at Deadline 7 (revision B, [REP7-011]) to refer to the findings of the HRA undertaken in respect of the MEASS.
- 9.8.3. The Applicant's updated in-combination assessment concluded that there would be no AEoI on The Swale SPA and Ramsar site as a result of the Proposed Development in combination with the MEASS, as the Proposed Development does not contribute to the AEoI predicted by the MEASS [REP7-011]. The Applicant noted that under either scenario (with or without the solar park), the MEASS identifies an approach to providing the required compensatory measures, having concluded that there are imperative reasons of overriding public interest and no suitable alternatives [REP7-011]. The Applicant reiterated this position in its response to the RIES [REP7-031].

²² European site conservation objectives for the Swale SPA [online] <http://publications.naturalengland.org.uk/publication/5745862701481984>

- 9.8.4. The Applicant's updated in-combination assessment was submitted at the final Examination deadline and as such, Natural England had not commented on this specific matter at the close of the Examination.
- 9.8.5. The Applicant concluded that the Proposed Development would not have an AEoI on any of the qualifying features of The Swale SPA and Ramsar site, either alone or in-combination with other plans and projects [REP7-011]. Several matters relating to the identification of AEoI of The Swale SPA and Ramsar site were discussed during the Examination, as reported below.

Management Plans and Habitat Management Steering Group

- 9.8.6. The RIAA explains that a 'Habitat Management Steering Group' (HMSG) was formed in the pre-application period in order to address the potential impacts of the Proposed Development on designated ecological sites including The Swale SPA and Ramsar site [REP7-011].
- 9.8.7. The HMSG continued to meet during the pre-Examination and Examination periods to guide the plans for mitigation and enhancement within the Proposed Development Site. The ongoing role of the HMSG (post any consent) has been discussed during the Examination, as reported below.
- 9.8.8. The HMSG's recommendations are included in the management prescriptions for the proposed habitat management areas, which are set out in the outline LBMP and are relevant to the Applicant's conclusion of no AEoI. The outline LBMP has been updated during the Examination, with the final version at close of Examination being revision E [REP7-013]. Requirement 5 of the dDCO [REP17-003] relates to the submission and approval of a LBMP (which must accord with the outline LBMP), with Natural England as a consultee to the discharge of this Requirement.
- 9.8.9. In addition to the outline LBMP, the Applicant's conclusion of no AEoI relies on measures included in the following proposed management plans, which were updated and discussed during the Examination as reported later in this chapter:
- outline SPA CNMP [REP7-020] (Requirement 13 of the dDCO [REP17-003] relates to submission and approval of a SPA CNMP which must accord with the outline SPA CNMP);
 - outline CEMP [REP7-016] and outline BBPP (Appendix B of the outline CEMP) (Requirement 11 of the dDCO [REP17-003] relates to submission and approval of a CEMP which must accord with the outline CEMP); and
 - outline Decommissioning and Restoration Plan (DRP) [REP7-018] (Requirement 17 (parts 10 to 12) of the dDCO [REP17-003] relates to submission and approval of a DRP which must accord with the outline DRP).

RSPB position on AEoI

- 9.8.10. The RR from the RSPB [RR-841] explained that it had serious remaining concerns with the Application and stated that: *'As it stands, we do not agree that the current impact assessment enables a conclusion of no adverse effect on integrity of the [Swale] SPA/Ramsar site to be reached'*.
- 9.8.11. In its Deadline 2 submission [REP2-101], the RSPB confirmed that it objected to the Proposed Development but was unable to make further submissions to the Examination due to resource constraints.
- 9.8.12. The RSPB advised that it deferred to Natural England and Kent Wildlife Trust in respect of Examination submissions [REP2-101]. However, the RSPB stated that it would continue to input to the HMSG to agree measures to avoid damage to The Swale SPA and Ramsar site [RR-841] and [REP2-101]. No further submissions to the Examination were received from the RSPB.

Habitat loss or change, proposed AR HMA and potential adverse effects on brent goose, lapwing and golden plover

- 9.8.13. The proposed development would result in the displacement of three wintering waterbird species of The Swale SPA and Ramsar site (brent goose, lapwing and golden plover) from the arable fields within the Proposed Development Site, which they would have otherwise used for foraging, resting and roosting. The RIAA determined that the arable fields are of high importance to these three species [REP7-011]. The arable fields therefore represent land that is functionally linked to The Swale SPA and Ramsar site but is outside of the designated sites. The assessment of potential AEoI of these three species as a result of habitat loss or change of this functionally-linked land during construction and operation of the Proposed Development (and the proposed approach to mitigating such impacts) was presented in section 6.1.2 of the RIAA [REP7-011].
- 9.8.14. The RIAA stated that the arable fields are of negligible or no importance to the remaining wintering waterbird species of The Swale SPA and Ramsar site [REP7-011].
- 9.8.15. To mitigate the loss of the foraging resource for brent goose, lapwing and golden plover, the Proposed Development includes measures to revert approximately 56ha of arable fields to permanent grassland pasture, known as the AR HMA [REP7-011]. The area affected by the AR HMA was illustrated on Figure 2 of the RIAA [REP7-011]. On a precautionary basis (a 50m avoidance zone around site infrastructure is assumed, where there may be a lower density of foraging birds), the RIAA described the AR HMA as providing 50.1ha of functionally available grassland area [REP7-011].

- 9.8.16. Natural England's RR advised that the AR HMA should maximise its production of grass for brent goose, as this species is '*..... more site faithful and have a shorter foraging distance than lapwings or golden plovers*' [RR-826]. This point was reiterated in Natural England's Deadline 3 submission [REP3-082].
- 9.8.17. To achieve this, the RIAA explained that the grassland within the AR HMA would be managed through a combination of grass cutting and application of nitrous fertiliser [REP7-011]. Inclusion of clover in the grassland mix was also proposed, with the RIAA citing evidence that clovers may be an effective way of attracting geese to a site (footnotes 41 to 43, [REP7-011]). The exact management prescriptions for the AR HMA was a matter discussed during the Examination, as reported below.
- 9.8.18. At ISH4, the Applicant confirmed that no additional measures were proposed to mitigate impacts from habitat loss to brent goose, lapwing and golden plover during construction, beyond those to mitigate the impact of habitat loss during operation [REP3-017]. However, the Applicant clarified that the AR HMA would be created before the first winter of construction [REP3-017]. The exact timing of the sowing of the AR HMA was a matter discussed during the Examination, as reported below.
- 9.8.19. Natural England's view was that in order to have sufficient certainty that an AEoI on The Swale SPA and Ramsar site could be avoided, there should be no net loss of foraging resource as a result of the Proposed Development [REP3-082].

Applicant's 'bird day' calculations

- 9.8.20. As explained in section 6.1.2 of the RIAA [REP7-011] and in section 9.6 of Ornithology Technical Appendix A9.1 [APP-223], the Applicant used a 'bird days' metric to assess the current use of the arable fields within the Proposed Development Site by these three species (also referred to as 'goose days' in respect of brent goose). This was compared to the number of bird days that could be supported by the proposed AR HMA, as follows:
- determine via site survey the inter-annual mean of the intra-annual mean of the peak monthly counts (the 'peak-mean') number of birds per day which are foraging on the arable land (as set out in paragraph 179 of the RIAA [REP7-011] and paragraph 104 of [APP-223]) - baseline survey data are provided in Appendix 6 of the RIAA [REP7-011]; and
 - multiply the peak-mean number of foraging birds by the number of days in the season, to calculate seasonal 'bird days' (as set out in paragraph 182 of the RIAA [REP7-011]) - this is the number of bird days that the AR HMA would need to provide to mitigate the loss of foraging resource fully.
- 9.8.21. The seasonal bird day calculations presented in the RIAA [REP7-011] are as follows: brent goose - 101,940 bird days/winter; golden plover - 28,802 bird days/winter; and lapwing - 56,023 bird days/winter.

- 9.8.22. In its RR, Natural England stated [RR-826] that it considered the 'bird days' metric to be an appropriate way of assessing losses and gains in habitat. Natural England also confirmed it was satisfied that the baseline bird surveys were undertaken during a representative part of the crop rotation, and hence that the 'peak-mean' is an appropriate way to calculate bird days [RR-826].

Brent goose

- 9.8.23. In the RIAA, the Applicant calculated that the AR HMA would support 2,097 foraging brent goose days/ha. The necessary 101,940 brent goose days would therefore require 48.6ha of grassland within the AR HMA. On a precautionary basis, the RIAA concluded that the AR HMA would provide 50.1ha of grassland habitat for geese – more than the required amount. The RIAA concluded that there would be no net loss of habitat for brent goose [REP7-011].
- 9.8.24. Natural England stated in its RR [RR-826] that there is evidence to show that grass cut five times and fertilised with 50kgN/ha can support 2,097 goose days/ha. Therefore, Natural England considered that it could have confidence in the predicted number of goose days for the AR HMA if this management regime was followed [RR-826]. Natural England stated that if 2,097 goose days/ha could be achieved without affecting other ecological interests, then it was satisfied that the 50.1ha AR HMA would be large enough to avoid an adverse effect on foraging brent goose [RR-826].

Golden plover and lapwing

- 9.8.25. In the RIAA, the Applicant calculated that 18.5ha of mitigation land was required for golden plover (for 28,802 bird days). The AR HMA would provide 50.1ha, so in excess of that requirement. The RIAA predicted no net loss of habitat for golden plover [REP7-011].
- 9.8.26. In respect of lapwing, the Applicant calculated in the RIAA that 56ha of mitigation land was required (for 56,023 bird days). The AR HMA would provide 50.1ha of habitat, less than the requirement. However, the Applicant considered that the additional capacity for golden plover could be utilised by lapwing, meaning there would be no net loss of habitat for lapwing [REP7-011].
- 9.8.27. As reported in paragraph 206 of the RIAA, the baseline surveys found that there was almost no coincidence between golden plover and lapwing and brent goose in the same fields at the same time (although the same fields were used at different times) [REP7-011]. Despite this, the Applicant considered that the mitigation area for golden plover and lapwing could be co-located in the same area and under the same management as that for brent goose. The RIAA explained that golden plover and lapwing feed on surface and soil invertebrates, whereas brent goose feeds on vegetation, meaning there is no competition for foraging resources between these species [REP7-011].

- 9.8.28. In its RR, Natural England acknowledged that the brent goose does not compete for the same food as lapwing and golden plover and that these species could 'potentially' be accommodated on the same piece of mitigation land [RR-826]. However, Natural England stated [RR-826] that there were some uncertainties around the bird day calculations for lapwing and golden plover. Specifically, Natural England noted that the calculation of bird days had been based on the existing arable habitat and considered it was unclear whether grassland would provide the same capacity [RR-826]. Natural England questioned how easy it would be for lapwing and golden plover to access their invertebrate prey if the AR HMA was managed as a dense sward for brent goose [RR-826].
- 9.8.29. Natural England advised that it had not been able to provide a specialist review of the calculations and conclusions for lapwing and golden plover at the RR stage but intended to work with the Applicant to resolve these uncertainties and provide advice during the Examination [RR-826]. The uncertainties raised in Natural England's RR are discussed further below.

Examination of supporting evidence and assessment findings

- 9.8.30. The RIAA cited various literature sources to support the proposals for the AR HMA in respect of brent goose (see footnotes 27 to 29 and 32 to 46 [REP7-011]).
- 9.8.31. In ExQ1.1.26 [PD-004], we asked the Applicant to confirm the extent to which the literature cited in the RIAA was applicable to the development of an AR HMA of this scale, in this location and for the particular species of bird involved.
- 9.8.32. In response, the Applicant considered that the main difference was that the literature studies for brent goose are based on established grassland, rather than arable reversion as required in respect of the Proposed Development [REP2-006]. The Applicant highlighted factors that attract brent goose to a feeding site (informed by a guidance note from Defra²³) and stated that these measures were all directly applicable to the proposed AR HMA and its management prescriptions [REP2-006].
- 9.8.33. In relation to lapwing and golden plover, the Applicant confirmed that the assessment relied primarily on research by Gillings *et al* (2007)²⁴, this being a study of mixed arable farmland for which capacity in terms of bird days was estimated for the two species together (ExQ1.1.26, [REP2-006]). The Applicant acknowledged that there are no directly applicable studies of the capacity of grassland, in terms of bird days, to support these species [REP2-006].

²³ Defra (2001) WCA26: *Management of Damage Caused by Brent Geese*
<http://adlib.everysite.co.uk/adlib/defra/content.aspx?id=000HK277ZW.0A4HIW1LGOGAJ8>

²⁴ Gillings, S., Fuller, R.J. and Sutherland, W. (2007). Winter field use and habitat selection by Eurasian Golden Plovers *Pluvialis apricaria* and Northern Lapwings *Vanellus* on arable farmland. *Ibis* **149**: 509-520

- 9.8.34. The Applicant stated that the cited literature all indicated that grassland would have a higher capacity to support lapwing and golden plover than arable crops [REP2-006]. Notwithstanding this, the Applicant explained that following advice from Natural England, it had applied a precautionary approach and based its analysis of the required area of the AR HMA for lapwing and golden plover on the capacity of arable crops [REP2-006]. As such, the Applicant considered that: '*..... whilst this literature may not be directly applicable, it is relevant and precautionary in terms of calculating the capacity of the AR HMA to host golden plover and lapwing*' [REP2-006].
- 9.8.35. In ExQ1.1.27 [PD-004], we asked Natural England to expand on the statement in its RR [RR-826] that brent goose, lapwing and golden plover could 'potentially' be accommodated on the same piece of mitigation land. Natural England was asked to explain what factors might determine whether lapwing, golden plover and brent goose could be accommodated on the same piece of mitigation land and whether it considered any additional evidence was required from the Applicant in this regard (ExQ1.1.27, [PD-004]).
- 9.8.36. In its response at Deadline 2, Natural England stated [REP2-096] that the factors determining whether both types of species could be accommodated are; whether there is physically enough space for the different flocks, and whether management for one does not hinder the other's ability to forage. The crucial factor, in Natural England's opinion, was whether the intensive grassland management necessary to feed the brent goose hinders the waders' ability to get to their invertebrate prey. Natural England noted that these waders prefer muddy patches where it is easy to probe for earthworms [REP2-096].
- 9.8.37. Natural England noted that the application of fertiliser for brent goose would also be helpful in providing some bare patches and invertebrate prey [REP3-082]. Natural England explained that it would support an adaptive management approach that could provide muddy patches later, if this would not compromise habitat for the goose, and we were told that this was agreed by the HMSG [REP3-082].
- 9.8.38. In [REP2-096], Natural England set out what it considered to be four areas of uncertainty regarding the wader calculations. These can be summarised as follows:
- whether the lapwing and golden plover bird days can be combined so that the over provision for golden plovers can make up the shortfall for lapwing;
 - the fact that a lapwing plus golden plover bird-days figure is not available for pasture, so the calculation of mitigation land requirements is based on arable land in Norfolk;
 - whether intensive management for brent goose will hinder lapwing and golden plover from getting at soil invertebrates; and
 - whether the conditions applicable to the Gillings *et al* (2007) study (*op cit*) will be replicated in the AR HMA.

- 9.8.39. Natural England [REP3-082] confirmed that it was working with the Applicant (through the HMSG) to resolve these uncertainties but considered that management of the AR HMA would be key. Natural England's view was that in order to have sufficient certainty that an AEoI on The Swale SPA and Ramsar site could be avoided, there should be no net loss of foraging resource as a result of the Proposed Development [REP3-082].
- 9.8.40. As such, discussions during the Examination regarding the establishment and management of the AR HMA are reported as follows.

Management prescriptions for AR HMA

- 9.8.41. The management prescriptions for the proposed AR HMA are set out in the outline LBMP, primarily in Appendix J (*Arable Reversion Habitat Management Area Management Plan*). The Applicant has updated the outline LBMP submitted with the DCO application [APP-203] during the Examination in response to discussions with the HMSG, comments from the ExA and from IPs, with the final version at the close of Examination being revision E, [REP7-013]. The AR HMA would be managed through a combination of grass cutting and application of nitrous fertiliser [REP7-011] and [REP7-013].
- 9.8.42. Natural England's RR [RR-826] stated that: '*Experimental manipulation 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. Therefore, we can have confidence in the predicted number of goose-days for the AR HMA, if this management regime is followed*'. In ExQ1.3.37 [PD-004], we asked the Applicant to explain how maintenance of the grass equivalent to the cutting frequency specified by Natural England in [RR-826] would be assured.
- 9.8.43. In response to ExQ1.1.37, the Applicant stated that a supporting study²⁵ had found no significant difference in the intensity of grazing by brent goose between cutting versus grazing, grazing with cattle or sheep, or cutting two, three, four or five times (ExQ1.1.37, [REP2-006]). The Applicant explained that its preferred option for maintaining the short sward in the AR HMA (that is required by the time the geese arrive at the Proposed Development Site in the autumn) would be to graze the grassland with cattle, sheep or both [REP2-006]. The Applicant explained that the sward would be monitored according to the prescription set out in Appendix J of the outline LBMP, further details of which it would include in an updated version of the outline LBMP. Mechanical cutting would then be undertaken if required to achieve the desired sward length [REP2-006].

²⁵ Vickery et al. (1994). (Vickery, J.A., Sutherland, W.J. and Lane, S.J. (1994). The management of grass pastures for Brent geese. *Journal of Applied Ecology* 31: 282-290)

- 9.8.44. The Applicant submitted updates to the outline LBMP at Deadlines 3 ([REP3-005], revision B) and 4 ([REP4-008], revision C), which included reference to a Kent Wildlife Trust Advice Sheet on choosing livestock for conservation grazing²⁶ to support its proposed approach. At Deadline 5, Natural England confirmed [REP5-050] it was satisfied with what was set out at paragraphs 42 and 347 of the outline LBMP (then [REP4-008]) in terms of grazing. However, Natural England noted that the success of the grazing would depend on finding a grazier that could respond quickly to adjust the grazing pressure if necessary, to achieve the right sward height at the beginning of winter [REP5-050].
- 9.8.45. The Applicant submitted a further update to the outline LBMP at Deadline 6 (revision D, [REP6-006]), followed by the final version at Deadline 7 (revision E, [REP7-013]), which retained reference to the Kent Wildlife Trust Advice Sheet. In response to comments from Natural England in [REP4-069], the final outline LBMP [REP7-013] included reference to surveys by an ecologist to assess the success of the AR HMA grassland management and status of water levels in years 0-1, 1-2, 2-3, 4-5, 10 and 20 and confirmed that a report will be provided to the HMSG following each survey visit.
- 9.8.46. In response to ExQ1.1.37 [PD-004], the Applicant confirmed [REP2-006] that application of fertiliser to the AR HMA would be required on an annual basis. In [REP2-096], Natural England recommended application of 12 tonnes organic manure/ha/year, leaving a 10m buffer between the ditches and the fertiliser application.
- 9.8.47. In response to concerns from Kent Wildlife Trust regarding water quality and use of fertiliser on the AR HMA [RR-799], the Applicant stated (KWT-3, [AS-009]): *'It is anticipated that spreading of organic fertiliser will be restricted beyond 10 m of wet field boundaries, in line with government guidance'*. In response to ExQ1.1.23, the Applicant explained [REP2-006] that it would update Appendix J of the outline LBMP to secure this commitment.
- 9.8.48. At Deadline 3, Appendix J of the outline LBMP (revision B, [REP3-005]) was updated to confirm that: *'Application of the fertiliser will be excluded from within 10m of the drainage ditches, in line with DEFRA best practice guidance'*. Table 3 of the AR HMA in the outline LBMP was also updated at Deadline 3 to confirm that up to the equivalent of 12 tonnes of organic fertiliser (e.g. farmyard manure) per hectare per year would be applied to the AR HMA [REP3-005], in line with Natural England's recommendation in [REP2-096]
- 9.8.49. However, the Applicant's updated outline LBMP at Deadline 4 (revision C, [REP4-008]) removed Table 3, and consequently the reference to application of 12 tonnes of organic fertiliser per hectare per year, from the outline LBMP [REP4-008]. This situation was unchanged in revision D

²⁶ Kent Wildlife Trust Land Management Advice Sheet 5 - *Choosing livestock for conservation grazing*

of the outline LBMP submitted at Deadline 6 (revision D, [REP6-006]) and so was queried in our Rule 17 request for further information²⁷, issued on 23 October 2019 ([PD-009], R17.3.1). In response, the Applicant reinstated the commitment to apply *'..... fertiliser in the form of farmyard manure of up to the equivalent of 12 tonnes per hectare per year*' into Appendix J (section 15.4.3) of the final outline LBMP [REP7-013].

- 9.8.50. As recommended by Natural England in [REP2-096], the Applicant also considered whether the exclusion of fertiliser within 10m of ditches would have any impact on the calculations (as presented in the RIAA) for the capacity of the AR HMA for brent goose. The Applicant provided calculations to demonstrate the impact in Table 2.17 (reference 29) of [REP3-020]. The Applicant reiterated these findings at Deadline 4, explaining that the recalculation without fertilising the area around the ditches resulted in a capacity of the AR HMA at 101,580 goose days, versus the 101,940 goose days previously calculated (i.e. a difference of 360 goose days) ([REP4-020] ExQ2.1.11). This information was added to the Applicant's RIAA at Deadline 7 ([REP7-011] revision B - paragraphs 198 and 199 refer).
- 9.8.51. Natural England's response to ExQ2.1.11 [REP4-069] and the signed post-submission SoCG between the Applicant and Natural England (Table 4, Ref 29, [AS-050]) both provide confirmation that: *'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'*. This point is also reiterated in Natural England's Deadline 5 submission [REP5-050].
- 9.8.52. In [REP5-048], Kent Wildlife Trust noted that the revised calculations result in the carrying capacity of the AR HMA for brent goose being 360 goose days short of the mitigation target. Kent Wildlife Trust confirmed that it *'..... sticks to the principle of meeting the mitigation target'* [REP5-048]. At Deadline 6, the Applicant [REP6-015] acknowledged Kent Wildlife Trust's position in this regard and referred to its earlier submissions to the Examination ([REP4-020] response to ExQ2.1.11; response 4 in Table 2.15 [REP4-041]; and response 4 in Table 2.16 [REP3-020]). This remained as an area of disagreement between the Applicant and Kent Wildlife Trust at the close of Examination, as reflected in the final signed SoCG between the parties ([REP17-009] Table 5).
- 9.8.53. The Applicant considered that the exclusion of fertiliser within 10m of ditches would have no impact on the calculations for lapwing and golden plover, as the capacities for those species were not based on fertilised or unfertilised grass [REP3-017]. This position was not disputed by any IPs during the Examination.
- 9.8.54. The RIAA explains that the Proposed Development would result in a 'substantive reduction' in the application of herbicides, pesticides and

²⁷ Issued under Rule 17 of the Infrastructure Planning (Examination Procedure) Rules 2010

fertiliser at the application site, when compared to the current land use as arable farmland [REP7-011]. As a result, beneficial effects on local habitats are predicted and the RIAA concludes that changes in surface water quality during operation would not result in a LSE [REP7-011].

- 9.8.55. In paragraph 3.3.2 of [REP2-096], Natural England sought confirmation of the current level of pesticide, fertiliser and herbicide use on the application site, to allow the benefit of ceasing the current arable operation to be quantified. ExQ1.1.23 [PD-004] asked the Applicant to provide an estimate of the level of application of fertilisers, herbicides and pesticides currently employed on the application site, and a comparison with the proposed application of fertiliser to the AR HMA.
- 9.8.56. In response, the Applicant confirmed that it would prepare a 'clarificatory report' to compare the baseline and proposed application of fertiliser in the AR HMA (ExQ1.1.23, [REP2-006]). This report was submitted at Deadline 4 [REP4-050]. It quantified the annual pesticide and fertiliser use under the current arable farming practices on the application site, as well as the proposed use with the solar farm and AR HMA in place. The report showed that with the solar farm and AR HMA in place, annual pesticide use would be reduced from a total of 2,597kg (7.33kg per ha) to zero. Annual fertiliser use would be reduced from a total of 73,956kg (208.74kg per ha) to 6,741kg (134.82kg per ha) [REP4-050].
- 9.8.57. At Deadline 5, Natural England confirmed [REP5-050] it was satisfied that fertiliser application rates over the whole Proposed Development Site would be lower than the current situation, as evidenced in [REP4-050]. Natural England acknowledged that there would be lower nutrient inputs to the ditches if the Proposed Development was built, which would be a benefit to the Ramsar invertebrate community over the current situation. Therefore, Natural England considered [REP5-050] that the issue raised in paragraph 3.3.2 of [REP2-096] was resolved.
- 9.8.58. The RIAA suggested that the use of manure would benefit feeding lapwing and golden plover by increasing the invertebrate biomass of the AR HMA [REP7-011]. The Applicant subsequently confirmed [REP6-015] that: '*The application of manure is not relied upon to achieve carrying capacities in the AR HMA for golden plover and lapwing that would be equivalent to the capacities recorded in arable land as reported by Gillings (2003, 2007); however, the application of manure is likely to increase the attraction of golden plover and lapwing to the ARHMA, this likelihood being based on the findings of the Gillings study and Tucker (1992)*'.
- 9.8.59. As reported in paragraphs 4.2.59 to 4.2.66 of the RIES [PD-010], we examined the potential need to source the manure from ivermectin-free cattle to avoid adverse impacts on invertebrates, in light of comments from Natural England [REP3-082], [REP4-069] and [REP5-050] and Kent Wildlife Trust [REP2-096], [REP4-068] and [REP5-048].
- 9.8.60. At Deadline 3, Appendix J of the LBMP (revision B, [REP3-005]) was updated to confirm that: '*The manure will be sourced from ivermectin*

free cattle (where possible) to avoid adverse effect on invertebrates.'
Additional commitments were included in Table 2 and Appendix J of the updated outline LBMP submitted at Deadline 6 (revision D, [REP6-006]), summarised as follows:

- in the event manure cannot be sourced entirely from ivermectin-free cattle, monitoring will be undertaken to understand the difference in developing invertebrate communities in areas treated with ivermectin-free manure, compared to areas with manure from ivermectin-dosed cattle;
- sampling will be undertaken of the ivermectin content of fertiliser applied to the AR HMA and invertebrate biomass, to establish any difference in usage according to variations in ivermectin content; and
- the findings and any necessary remedial measures will be discussed with the HMSG - remedial measures could include adjustments to the sward management in terms of manure fertilisation (including ivermectin content and invertebrate density).

9.8.61. These additional commitments made at Deadline 6 are included in the final outline LBMP (revision E, [REP7-013]). In the signed, post-submission SoCG between the Applicant and Natural England, it is agreed that: *'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'* (Table 5, reference 5, [AS-050]). In its final signed SoCG with the Applicant, Kent Wildlife Trust welcomed the additional commitments to monitor ivermectin content and density and the potential to alter the ivermectin content should a negative effect be observed (Table 5, [REP17-009]).

Seed mix for AR HMA

9.8.62. We discussed the composition of the proposed grassland seed mix for the AR HMA (set out in Table 7.1 of the outline LBMP) during the Examination, as reported in paragraphs 4.2.67 to 4.2.73 of the RIES [PD-010].

9.8.63. At Deadline 4, the Applicant amended Table 7.1 of the outline LBMP (revision C, [REP4-007]) to remove saltmarsh grass and add rye grass, red fescue, crested dog tail and red clover, following Natural England's recommendation for amendments to the seed mix (ExQ2.1.5, [REP4-069]).

9.8.64. At Deadline 5, Natural England confirmed [REP5-050] it was content with the seed mix set out in the updated outline LBMP [REP4-007]. In the Applicant's final outline LBMP submitted at Deadline 7 (revision E, [REP7-013]), the grassland seed mix in Table 7.1 remained as per [REP4-007].

Timing of the sowing of the AR HMA

9.8.65. ExQ1.1.30 [PD-004] asked the Applicant to confirm at what point in the construction programme the AR HMA and each of the other HMAs would be established.

- 9.8.66. In [REP2-096], Natural England stated that it was 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. At Deadline 3, Natural England [REP3-082] stated that the early sowing of grassland to provide a foraging resource as soon as possible was necessary to avoid an AEoI.
- 9.8.67. In response to ExQ1.1.30, the Applicant stated that the timing of the sowing of grasslands in the different areas would vary depending on the timing of the start of construction [REP2-006]. The Applicant explained that the outline LBMP (revision A, [APP-203]) would be updated to provide the proposed timetabling of the development of the AR HMA for different construction commencement scenarios, with an accompanying plan showing the relevant areas (ExQ1.1.30, [REP2-006]).
- 9.8.68. The Applicant provided a schedule for the sowing and establishment of the AR HMA grassland in the Deadline 3 iteration of the outline LBMP (revision B, [REP3-005], section 16).
- 9.8.69. ExQ2.1.5 [PD-008] asked Natural England and Kent Wildlife Trust whether section 16 of the outline LBMP [REP3-005] addressed their previous concerns around sowing and establishment of the AR HMA and whether this secured the early sowing of grassland which Natural England considered necessary to avoid an AEoI [REP3-082].
- 9.8.70. In response, Natural England noted [REP4-069] that whilst paragraph 317 of the outline LBMP [REP3-005] stated that '*grassland will be established in advance of the first winter before construction is due to commence*', section 16 showed that for some construction start timetables, the grassland would be sown after construction, although before the winter when birds would arrive.
- 9.8.71. Kent Wildlife Trust stated [REP4-068] that the implementation of the AR HMA in [REP3-005] would commence after the start of construction (rather than construction starting after the mitigation has been confirmed to have established), but before the first winter when the impacts on brent goose, lapwing and golden plover can be expected. Kent Wildlife Trust considered that it would be preferable to implement the AR HMA and establish the mitigation prior to the start of construction (and therefore impacts) [REP4-068].
- 9.8.72. Kent Wildlife Trust also advised that in the event the establishment of the AR HMA does not go according to expectations, leading to a reduction in carrying capacity for the target species, it would be advisable to halt construction with respect to avoiding further loss of carrying capacity until habitats have established [REP4-068]. We explored this point at ISH6 [EV-027], with the Applicant stating (paragraph 6.30 of [REP5-011] refers) that temporary loss during construction was assessed in the ES as not significant, on the premise that in some years those species for which the grassland mitigation is provided do not use the site.

- 9.8.73. In response to R17.2.1, the Applicant confirmed [REP7-030] that its statement in [REP5-011] was also applicable to the conclusions on AEoI, stating that paragraphs 164 to 170 of the RIAA [REP7-011] set out that temporary loss of foraging resources during construction would not result in the conservation objectives being undermined, therefore no AEoI was concluded.
- 9.8.74. The timing of the sowing of the AR HMA was discussed further at ISH6 [EV-027] in light of the updated outline LBMP submitted at Deadline 4 (revision C, [REP4-008]). The Applicant stated [REP5-011] that section 16 of the outline LBMP [REP4-008] now included sowing timetables based on different construction start dates, which it explained had been welcomed by the HMSG.
- 9.8.75. Natural England stated [REP5-050] it would wish to see the habitat management areas, in particular the AR HMA, seeded and growing before the birds arrive in the first winter after construction has started.
- 9.8.76. Kent Wildlife Trust considered [REP5-048] that the timing of establishment of the AR HMA was still an issue that required 'correction' in the outline LBMP and advised that it would provide further suggested changes to the Applicant.
- 9.8.77. At Deadline 6, the Applicant submitted an updated outline LBMP (revision D, [REP6-006]), which at section 18 (formerly section 16) added reference to implementation of the AR HMA grassland (and Grazing Marsh Grassland) from year 0. Revision D of the outline LBMP [REP6-006] also included reference to the grassland habitats within the AR HMA being established prior to the first winter of construction at page 27 and in Appendix J. These additional commitments were retained in the Applicant's final outline LBMP submitted at Deadline 7 (revision E, [REP7-013] - see section 17 (formerly section 18), page 26 (formerly page 27), and Appendix J).

Level of certainty regarding no AEoI

- 9.8.78. The uncertainties around the wader calculations as highlighted by Natural England in [REP2-096] were discussed further at ISH4 [EV-020]. The Applicant explained it had been in further discussions with Dr Gillings, in which Dr Gillings agreed that golden plover and lapwing compete for the same resources to some extent and therefore transferring capacity would be applicable [REP3-017]. Natural England considered that if the Applicant submitted evidence of this communication with Dr Gillings, this may resolve uncertainty number one, as set out above [REP3-082]. We requested a copy of this communication in ExQ2.1.12 [PD-008].
- 9.8.79. ExQ2.1.12 [PD-008] also asked Natural England to comment on whether the information provided in Table 2.17 of the Applicant's response to WRs [REP3-020] resolved any of the four areas of uncertainty around the wader calculations.
- 9.8.80. At Deadline 4, Natural England responded to ExQ2.1.12 [REP4-069] as follows:

- subject to confirmation from Dr Gillings, uncertainty no.1 was resolved - the bird days for lapwing and golden plover could be combined;
- uncertainty number two could not be entirely resolved as there is no experimental data for the number of wader bird days supported by brent goose pasture;
- for uncertainty number three, the Applicant's response to WRs [REP3-020] (references 32 and 33) demonstrated that lapwing and golden plover will use pasture with a short, dense sward - therefore, intensive management for brent goose would not necessarily hinder foraging lapwing and golden plover. However, the references cited by the Applicant indicate that old pastures are preferred over new - therefore, foraging waders in old pastures may be exploiting a wider range of invertebrate prey than will be available in the AR HMA (where earthworms are likely to be the main prey item). The use of ivermectin-free manure will be important in improving the invertebrate biomass of the AR HMA; and
- uncertainty number four was reduced by the fact that lapwing and golden plover were recorded during the Applicant's pre-application baseline surveys using the fields that will make up the AR HMA.

9.8.81. The Applicant provided an Additional Submission [AS-040] shortly after Deadline 4 including a statement from Dr Gillings confirming: *'If the carrying capacity values are real, then it seems reasonable to me to assume that the carrying capacity for Lapwings can be added to the carrying capacity for Golden Plovers. This total "plover days" value could then be shared out according to how common the two species are relative to one another at a particular location'*.

9.8.82. At Deadline 5, Kent Wildlife Trust [REP5-048] considered that: *'..... as Dr Gillings has confirmed that the figures for lapwing and golden plover carrying capacity from his study can be combined, this particular issue has been dealt with'*. Similarly, Natural England [REP5-050] was satisfied that the lapwing and golden plover bird days could be combined and thus resolved this uncertainty.

9.8.83. Natural England considered [REP5-050] that as there had been confirmation that the lapwing and golden plover bird days can be combined, giving a requirement of around 33ha for both species, the provision of 51ha was sufficiently precautionary to overcome the uncertainties it had previously identified surrounding the sufficiency of the AR HMA for lapwing and golden plover (as set out in Natural England's answer to ExQ2.1.12 [REP4-069]).

9.8.84. Natural England noted that the recommendation of a HMSG meeting on 23 August 2019 *'..... 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 AR HMA for foraging'* [REP5-050]. Subject to this being added to the outline LBMP, along with further detail on the constitution of the HMSG, Natural England was satisfied that an AEoI of The Swale SPA and Ramsar site for lapwing and golden plover would be avoided [REP5-050].

- 9.8.85. Natural England also confirmed [REP5-050] that, subject to the updates to the outline LBMP discussed at ISH6 [EV-027] (to secure the constitution and status of the HMSG), it was satisfied that the AR HMA is sufficient to avoid an AEoI of The Swale SPA and Ramsar site for brent goose.
- 9.8.86. The Applicant's updated outline LBMP at Deadline 6 (revision D, [REP6-006]) added reference (at page 29 and Appendix K) to the creation of additional surface water features, including scrapes, within the FGM HMA. It was explained that these measures '*..... are complementary to the management of the AR HMA*' and would be undertaken with reference to RSPB guidance²⁸ [REP6-006]. The Applicant considered that the further details of the management of the FGM HMA in the SSSI are such that '*NE should be able to conclude no adverse effect on integrity with regards to lapwing and golden plover*' [REP6-015]. These commitments were retained in the Applicant's final outline LBMP, submitted at Deadline 7 (revision E, [REP7-013]).
- 9.8.87. With reference to the details of the constitution and status of the HMSG, the Applicant confirmed in [REP6-015] that '*The Applicant will consult the HMSG on a draft governance for the HMSG and the Applicant welcomes further comment from KWT and the HMSG*'. Section 1.4 ('HMSG Governance') was blank in the updated outline LBMP at Deadline 6 (revision D, [REP6-006]). In the Applicant's final outline LBMP submitted at Deadline 7 (revision E, [REP7-013]), section 1.4 had been populated with text clarifying the constitution and governance of the HMSG. In response to R17.3.2, the Applicant stated [REP7-030] that the HMSG members and the three host local planning authorities had been consulted on this wording prior to its insertion into the final outline LBMP, with the updates suggested having been incorporated and agreed.
- 9.8.88. The signed, post-submission SoCG between the Applicant and Natural England (Table 5, Ref 12, [AS-050]) confirmed Natural England agreed with the text included in section 1.4 of the final outline LBMP [REP7-013]. Similarly, the Applicant's final signed SoCG with Kent Wildlife Trust (Table 6, [REP17-009]) confirmed Kent Wildlife Trust agreed with the governance arrangements for the HMSG as set out in the Deadline 7 outline LBMP [REP7-013].
- 9.8.89. In response to R17.2.2 [PD-009], Natural England noted [REP7-109] that provision for scrapes in the SSSI land had now been added to Appendix K of the outline LBMP. Natural England confirmed that, subject to consultation with the HMSG and SSSI consent from Natural England, it was satisfied that this recommendation of the HMSG has been acted on [REP7-109]. Agreement on this matter was also reflected in the signed, post-submission SoCG between the Applicant and Natural England [AS-050].

²⁸ RSPB, Farming for Wildlife, Scrape Creation for Wildlife. Available at: https://www.rspb.org.uk/globalassets/downloads/documents/farming-advice/scrapecreationforwildlife_tcm9-255102.pdf

- 9.8.90. At Deadline 7, Natural England's advice (response to R17.2.2, [REP7-109]) was that the mitigation measures set out in the outline LBMP were sufficient in relation to lapwing, golden plover and brent goose. Therefore, Natural England advised that when a formal appropriate assessment is undertaken, the evidence before the SoS is sufficient to support a conclusion of no AEoI of The Swale SPA [REP7-109].
- 9.8.91. Whilst Natural England's response to R17.2.2 did not mention the Swale Ramsar site, Natural England confirmed in its comments on the RIES (page 1, [REP7-109]) that '*As set out in our Statement of Common Ground submitted for Deadline 7 [AS-050], this additional material enables Natural England to 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 Swale Special Protection Area (SPA) and Ramsar site.*'

Our findings in relation to AEoI of brent goose, lapwing and golden plover of the Swale SPA and Ramsar site

- 9.8.92. The Proposed Development would result in the displacement of three wintering waterbird species of The Swale SPA and Ramsar site (brent goose, lapwing and golden plover) from arable fields within the application site, which they would have otherwise used for foraging, resting and roosting [REP7-011]. The loss of this functionally-linked habitat would be mitigated by the proposed AR HMA and there would be no net loss of habitat for brent goose, golden plover or lapwing [REP7-011]. This conclusion relies on measures set out in the outline LBMP and secured through the DCO, which have been discussed and refined during the Examination.
- 9.8.93. The conservation objectives for The Swale SPA include maintaining or restoring the extent and distribution of the habitats of the qualifying features. Taking account of the mitigation proposed (the AR HMA), we consider that the loss of the arable fields, which are not located within the boundaries of the European sites, would not undermine the conservation objectives of The Swale SPA.
- 9.8.94. Having regard to the information provided and the measures secured through the Recommended DCO, we are of the view that habitat loss or change as a result of the Proposed Development would not result in an AEoI of brent goose, lapwing, golden plover and the other wintering waterbird qualifying features of The Swale SPA and Ramsar site, either alone or in-combination with other plans or projects. We note that this conclusion is shared by Natural England, as confirmed in [REP7-109] and [AS-050]. We acknowledge that Kent Wildlife Trust disagrees with this conclusion [REP17-009] but consider that the available information adequately supports our findings.

Habitat Loss or Change, Grazing Marsh Grassland Management Plan and Potential Adverse Effects on Marsh Harriers

Background

- 9.8.95. The Applicant's RIAA [REP7-011] confirmed that the Proposed Development would result in a change from growing crops in the arable fields to the presence of solar panels and the energy storage facility, which potentially would reduce the area available for foraging marsh harriers. The Applicant's baseline flight activity surveys demonstrated that the Proposed Development Site provides an important foraging area for marsh harriers (a component species of the breeding bird assemblage qualifying feature of the Swale SPA) throughout the year. However, the RIAA explained that the arable fields are not favoured foraging habitat, with marsh harriers mostly recorded foraging along the ditch and grassland strips at the edges of the arable fields and throughout the coastal grazing marsh and reedbed strip just inland of the sea wall [REP7-011].
- 9.8.96. The RIAA stated at paragraph 81 that, in the absence of mitigation, a LSE on marsh harrier resulting from the loss of functionally-linked land cannot be discounted [REP7-011].

Potential adverse effects on marsh harriers

- 9.8.97. The Applicant's assessment of potential AEoI on marsh harrier as a result of habitat loss or change during the construction and operation of the Proposed Development (and the proposed approach to mitigating such impacts) is presented in section 6.1.2.7 of the RIAA [REP7-011]. The RIAA concludes that subject to the appropriate management of the large grassland swathes between the solar arrays, there would be no AEoI on marsh harrier of The Swale SPA [REP7-011].
- 9.8.98. In ExQ1.1.11 [PD-004], we asked the Applicant to confirm the management measures proposed for the areas between the solar panel arrays and the ditches for marsh harrier (the 'Field Margin and Ditch Margin Habitat'). The Applicant explained [REP2-006], with reference to Figure A5.1 of the outline LBMP (then [APP-203], now superseded by [REP7-013]), that the areas between the solar panel arrays and ditches would be managed as Coastal and Floodplain Grazing Marsh.
- 9.8.99. The Applicant [REP2-006] pointed to Appendix A of the outline LBMP for the management prescriptions for the Coastal and Floodplain Grazing Marsh Grassland (titled '*Grazing Marsh Grassland Management Plan*' (GMG MP)). The aim of the GMG MP is to establish a grassland sward with greater ecological value than the existing arable land [REP7-013].
- 9.8.100. Natural England stated [REP2-096] that there was some uncertainty as to whether individual marsh harrier would continue to forage along the ditches within the proposed solar park. Natural England considered that this uncertainty emerges from the lack of existing equivalent sites with which to compare the potential response of marsh harrier to the

presence of solar panels [REP2-096]. In its response to ExQ1.1.11, the Applicant accepted [REP2-006] that there was no peer-reviewed empirical evidence regarding changes in behaviour of marsh harriers at or around solar farms, as reported at paragraph 4.2.107 of the RIES [PD-010].

- 9.8.101. In its WR, Natural England recognised that the setting back of panels to a minimum of 15m from the ditches (as referenced in paragraph 212 of the RIAA [REP7-013]) would be helpful in reducing the risk of creating 'pinch points' which would deter birds [REP2-096]. Natural England considered that the creation of rough grassland to maximise the presence of small mammals was crucial in encouraging marsh harriers to continue foraging in the area. Similarly, in its WR, Kent Wildlife Trust considered [REP2-092] that, if successfully delivered by the LBMP, there is no dispute that the habitats created along the ditches will be of a type used by marsh harrier.
- 9.8.102. However, Kent Wildlife Trust [REP2-092] and an IP, Mr Gomes [REP2-072], expressed concerns about the solar panels (plus fences in some places) creating a development 'corridor' that marsh harriers would not use.
- 9.8.103. We explored this issue at ISH4 [EV-020]. The Applicant confirmed its position that there would be no adverse effect on the Swale SPA, based on creating suitable areas of habitat for foraging for marsh harriers between the solar arrays and the Aquatic Habitats Management Plan (Appendix H of the outline LBMP) to improve ditch water quality and the reed bed.
- 9.8.104. The Applicant stated [REP3-017] that monitoring and adaptive management measures for marsh harrier behaviour (including those requested by Kent Wildlife Trust in [REP2-092]) would be considered in subsequent updates to the outline LBMP. The Applicant also advised that any remedial measures would aim to vary grazing pressure and water levels in ditches to create a sward appropriate to support the marsh harriers' prey [REP3-017]. These points were subsequently addressed in updates to the outline LBMP and are included in Appendix A of the final outline LBMP [REP7-013].
- 9.8.105. As set out in [REP3-082], Natural England's view was that to be confident in a conclusion of no AEOI of The Swale SPA for marsh harriers, there should be no net loss of foraging resource. As such, Natural England advised the Applicant to maximise the habitat between the ditches and solar panels to provide as many small mammals as possible as food for marsh harriers [REP3-082]. Natural England advised that an abundant food source may encourage marsh harriers to overcome any reticence they might have about entering the proposed solar park [REP3-082].
- 9.8.106. However, Natural England acknowledged [REP3-082] that if marsh harriers are deterred from using the site by the presence of the panels, this food will not be available to them. Natural England considered that absolute certainty over the response of marsh harriers was not possible

as there are no equivalent sites and the Proposed Development has not yet been built. Therefore, Natural England explained that it would work with the Applicant and the HMSG on how to resolve the uncertainty [REP3-082]. Subsequent discussions on this during the Examination are reported as follows.

Carrying capacity of the DCO area

- 9.8.107. We asked the Applicant to provide a calculation for the carrying capacity of the Order area for marsh harriers before and after the implementation of the Proposed Development, and to define the amount of prey likely to be provided by the different parts of the Order area, with a view to demonstrating how the change in habitat quality across the site will influence how much food will be provided in the different parts (ExQ2.1.15, [PD-008]). The Applicant was also asked to confirm the width of the ditch corridors at the northern part of the application site, and to comment on whether they would be wide enough that marsh harriers would not be deterred from entering the site from the existing habitat along the borrow dyke (ExQ2.1.15, [PD-008]).
- 9.8.108. The Applicant responded [REP4-020] that the South Swale Nature Reserve and adjacent habitats have historically supported nesting marsh harrier, although not at a consistent level since 2004, with data showing single nest attempts each year between 2013 and 2018, and between 3 and 8 pairs attempting to nest each year from 2004 to 2012 (as explained at paragraph 351 of ES Chapter 9 - Ornithology [APP-039]). The Applicant explained that the data on nesting attempts was helpful in the quantification of the carrying capacity of the Order area, although it is known that other marsh harriers from a wider area also forage at the site [REP4-020].
- 9.8.109. The Applicant explained that structurally diverse habitat such as a rough grassland is likely to contain a greater variety of food sources and potential nesting sites for a variety of small mammals. The Applicant provided some information [REP4-022] which confirmed mammals have been shown to distribute themselves between habitats according to habitat quality, with higher densities of mammals in higher quality habitats. The Applicant provided a summary of the results of a study of barn owl feeding areas in Northumberland²⁹, as reported at paragraphs 4.2.117 to 4.2.199 of the RIES [PD-010].
- 9.8.110. The Applicant concluded that the type of management of arable fields would have a huge impact on the density of mammals present and overall biodiversity and therefore, whilst the habitat enhancements at the Proposed Development Site were likely to improve conditions for many small mammals, an accurate quantification of this was not feasible [REP4-020]. The provision of additional favourable habitat, associated increase in prey species and the more sympathetic management of water levels are all factors that were expected to have beneficial effects for

²⁹ Keene, A. (2009). Study of small mammal populations within two Barn owl corridors at Folly Farm. *Bioscience Horizons* 2, reported at [REP4-022].

marsh harrier. Whilst it was acknowledged that individual birds may be dissuaded from utilising the site by the presence of the Proposed Development, the Applicant predicts that greater availability of prey and the more favourable habitat created would at least maintain the carrying capacity of the Order area at a population level (ExQ2.1.15, [REP4-020]).

- 9.8.111. The Applicant was not initially proposing to include details of sampling of small mammal populations in the outline LBMP. However, following discussions at ISH6 [EV-027], the outline LBMP was updated at Deadline 6 [REP6-006] to state (paragraph 72) that an ecologist would visit the site regularly during construction and during operation in years 0-1, 1-2, 2-3, 4-5, 10 and 20 to monitor bird activity (including marsh harriers) and to undertake sampling of small mammal populations in relation to marsh harrier prey availability. The findings of the monitoring would be reported to and discussed with the HSMG, along with any necessary remedial measures should the triggers set out in section 6.5.3 of [REP6-006] occur.
- 9.8.112. We issued a Rule 17 question (R17.2.3, [PD-009]) alongside the RIES [PD-010], which asked Natural England and Kent Wildlife Trust whether the updated Deadline 6 version of the outline LBMP [REP6-006] including behavioural monitoring, flight surveys and small mammal sampling surveys (in relation to marsh harrier prey availability) satisfied their concerns in this respect.
- 9.8.113. Natural England reported [REP7-109] further discussions with the Applicant regarding potential additional remedial measures outside the developed area, which it expected to be included in the Deadline 7 version of the outline LBMP. Subject to that potential remedial measure being added, Natural England was satisfied that the updated triggers and remedial actions (along with the additional evidence supplied by the Applicant in answer to R17.2.4) were sufficient to address its concerns relating to marsh harriers [REP7-109].
- 9.8.114. Kent Wildlife Trust [R17.2.3, REP7-107] welcomed the additional monitoring details in the outline LBMP, including the commitment to small mammal surveys, but stated that there were still no remedial measures to deal with the potential displacement of marsh harrier by the solar panels.
- 9.8.115. Appendix A, section 6.5.3 ('Triggers and Remedial Actions') was updated in the final outline LBMP (revision E, [REP7-013]). This stated that other management plans could be adjusted (within the Proposed Development Site but outside the developed area, for example in the FGM HMA and AR HMA) for the benefit of foraging marsh harrier. Agreement on this matter was reflected in Table 5, reference 13 of the final signed post-submission SoCG between the Applicant and Natural England [AS-050].

Solar panels as a deterrent

- 9.8.116. In ExQ2.1.15 [PD-008], we asked the Applicant to confirm the width of the corridors through the solar array along ditches and paths at the northern part of the site and comment on whether they would be

sufficiently wide that marsh harriers would not be deterred from entering the solar array from the existing favoured habitat along the borrow dyke.

- 9.8.117. The Applicant [REP4-023] provided the information requested on the separation between arrays along the northern edge of the application site. The Applicant confirmed it was confident that the separations achieved were sufficiently wide that marsh harriers would not be deterred from entering the solar array area from the borrow dyke.
- 9.8.118. At the HMSG meeting on 23 August 2019 (meeting notes provided in [REP4-021]), the issue of solar panel deterrence for marsh harrier was discussed. The HMSG asked the Applicant whether there was any evidence relating to marsh harriers nesting near solar panels. The Applicant suggested that at the Kemsley Paper Mill (near Sittingbourne in Kent), marsh harrier continued to nest during construction of the energy centre.
- 9.8.119. Kent Wildlife Trust [REP4-068] stated that with no studies to compare it to, the reaction of marsh harriers to the solar park, either on the site-wide or individual ditch scale, will remain an unknown. Kent Wildlife Trust considered that there were no adaptive measures in the outline LBMP that would mitigate if marsh harriers were found not to use the inter-array grassland areas. Kent Wildlife Trust suggested that, if there is shown to be, through monitoring, a minimum width that the harriers will use, panels in those areas that fall below this could be decommissioned to widen these areas [REP4-068].
- 9.8.120. At Deadline 5, the Applicant maintained [REP5-015] that the habitat management proposals across the site, as set out in the outline LBMP, would provide enhanced foraging resources for marsh harrier and that they would be available to marsh harrier. The Applicant confirmed that decommissioning of panels to widen inter-array grassland areas is not proposed as a remedial action [REP5-015].
- 9.8.121. The Applicant pointed out [REP5-015] that the arable fields under the current baseline occupy approximately 390ha in extent. 22.5% of this currently arable area that comprises the AR HMA and LGM HMA will remain undeveloped with no solar panels or infrastructure, with arable to grassland reversion enhancements that will provide more suitable foraging habitat for marsh harriers, at least during some parts of the year [REP5-015]. The Applicant concluded that the inter-array grassland habitats will continue to attract foraging marsh harriers to the Proposed Development Site and there will not be an AEoI of The Swale SPA [REP5-015].
- 9.8.122. To try to resolve this uncertainty, we issued a Rule 17 request (R17.2.4, [PD-009]) alongside the RIES [PD-010], as reported below.

Level of certainty regarding no AEoI

- 9.8.123. As reported in paragraphs 4.2.132 to 4.2.147 of the RIES [PD-010], concerns were raised during the Examination regarding the level of certainty around the Applicant's conclusion of no AEoI of marsh harrier of

The Swale SPA and the appropriate application and interpretation of case law.

- 9.8.124. Natural England stated [REP3-082] that to be confident in a conclusion of no AEoI of The Swale SPA for marsh harriers, the Applicant should ensure that there is no net loss of foraging resource. There was concern that if marsh harriers are deterred from using the Proposed Development Site by the presence of the panels, this food will not be available to them [REP3-082].
- 9.8.125. The approach taken by the Applicant was 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's 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 [REP3-082] and [REP5-050]. However, Natural England considered that there was uncertainty over whether the landscape changes would deter marsh harriers from accessing the habitat provided [REP5-050]. Therefore, absolute certainty over the response of marsh harriers to solar panels would not be possible as there are no equivalent sites and the Proposed Development has not yet been built [REP3-082 and REP5-050]. In order to be certain that an AEoI of The Swale SPA will be avoided, Natural England considered that there should be both no net loss of habitat and no net loss of foraging opportunities [REP5-050]. The Applicant expressed its position on the level of certainty required for the purposes of HRA at Deadlines 2 [REP2-027] and 5 [REP5-015].
- 9.8.126. To address the uncertainty around the marsh harrier conclusions, we issued a Rule 17 request (R17.2.4, [PD-009]) alongside the RIES [PD-010]. Broadly, this asked the Applicant to provide two estimates of the proportion of marsh harrier foraging habitat which would be affected or lost as a result of the Proposed Development, in the context of The Swale SPA and the applicable functionally-linked land. The first estimate was to 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 was correct. The second estimate was to 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 (R17.2.4, [PD-009]).
- 9.8.127. In response to R17.2.4, the Applicant submitted a Written Representation (WR) on marsh harriers to the Examination at Deadline 7 (revision A, [REP7-037], subsequently updated by revision B, [REP17-013]). The areas of the Proposed Development Site to which the different estimates relate are illustrated on Figure 1 [REP17-013]. The Applicant stated that approximately 3,385ha of suitable marsh harrier foraging habitat is available within The Swale SPA and at least 4,175ha of foraging habitat outside the SPA, representing a combined total of approximately 7,560ha [REP7-013]. These areas are illustrated on Figure 2 of [REP7-013].

- 9.8.128. Paragraph 20 of [REP7-037] stated that *'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 245.9 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 3.3%'*. We note that revision B of [REP17-013] updates the estimations of 245.9ha and 3.3% (provided in paragraph 20 of revision A, [REP7-037]) to 256.5ha and 3.4% respectively.
- 9.8.129. In respect of the second estimate, the Applicant stated in paragraph 21 of [REP7-037] that this would equate to a potential loss of 292ha of marsh harrier foraging habitat, representing *'..... less than 4% 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 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 (4% of 24-42 pairs)'*. We note that revision B of [REP17-013] updates the estimation of 4% (provided in paragraph 21 of revision A, [REP7-037]) to 3.9%. This is still equated to 1 to 2 pairs of marsh harriers from the SPA population [REP17-013].
- 9.8.130. The Applicant considers [REP17-013] that even in the event that marsh harriers do not use the corridors of reedbed and grassland habitat between the solar array fields post-construction for behavioural reasons, this would not affect the long-term viability of the SPA population and that it can reasonably be concluded, beyond reasonable scientific doubt, that there will be no AEoI of marsh harrier of The Swale SPA. The Applicant reiterated that the arable fields are not part of The Swale SPA and comprise functionally-linked land for marsh harriers, noting that some 7,500ha of existing potential marsh harrier foraging habitat is available in and around the SPA [REP17-013].
- 9.8.131. Our R17.2.5 [PD-009] asked Natural England and Kent Wildlife Trust to comment on the Applicant's response to R17.2.4 and to explain whether they considered each of the estimates to represent such a high percentage loss or change in overall availability of foraging habitat that it could lead to a finding of AEoI relating to the marsh harrier population associated with The Swale SPA.
- 9.8.132. In its response to R17.2.5, Natural England explained [REP7-109] that the Applicant had provided Natural England with its WR on marsh harriers on 25 October 2019, with a copy provided as Appendix B of the final post-submission SoCG [AS-050]. In respect of the first estimate (based on a figure of 4.4% foraging habitat loss), Natural England was content that this would not constitute an AEoI of The Swale SPA as the management of the inter-array grasslands and other habitats is designed to provide greater prey availability than the current situation (R17.2.5, [REP7-109]).

- 9.8.133. In respect of the second estimate (based on a figure of 5% habitat loss), Natural England's advice was that this would not lead to an AEoI, based on the fact that improved foraging habitat will be provided around the edge of the solar park and along the ditches in the AR HMA, and also because it is unlikely that marsh harrier population is so constrained that the loss of that part of the supporting habitat would lead to a reduction in productivity to the extent that the SPA population would be affected (R17.2.5, [REP7-109]). Natural England noted that this conclusion is also supported by the remedial measures added to the final outline LBMP at Deadline 7 (revision E, [REP7-013]) (see 9.8.107 *ff* above).
- 9.8.134. Natural England confirmed that the Applicant's WR on marsh harriers, together with the updated proposals added to the outline LBMP, enabled it to advise that when a formal appropriate assessment is undertaken, the evidence before the SoS is sufficient to support a conclusion of no AEoI of The Swale SPA [REP7-109]. Agreement on this matter is also reflected in the final signed, post-submission SoCG between the Applicant and Natural England ([AS-050], Table 5, references 13 and 15).
- 9.8.135. We note that the version of the WR on marsh harriers provided in Appendix B of [AS-050] (on which Natural England's response to R17.2.5 has been based) contains slightly higher figures than the final version of the WR (revision B, [REP17-013] - specifically, for the first estimate 4.4% compared to 3.4%, and for the second estimate 5% compared to 3.9%). However, as Natural England's agreement with the conclusion of no AEoI is based on higher figures of habitat loss than those set out in the final version of the WR [REP17-013], we are confident that the revised figures in [REP17-013] would not change Natural England's overall view.
- 9.8.136. Natural England had initially considered that off-site habitat creation could be a way of resolving the uncertainty surrounding marsh harriers [REP5-050]. In light of this suggestion, the Applicant was asked in R17.2.6 [PD-009] whether it intended to pursue available mechanisms to deliver any additional land off-site.
- 9.8.137. The Applicant confirmed [REP7-030] that it did not intend to pursue mechanisms to deliver additional land as mitigation for foraging marsh harriers, having reached consensus with Natural England of no AEoI on The Swale SPA even in the worst-case scenario. Natural England also considered that the Applicant had provided enough information (through its answer to R17.2.4) to demonstrate that the remedial actions for marsh harrier in the outline LBMP are sufficient. Therefore, Natural England no longer considered off-site habitat creation to be necessary [REP7-109].
- 9.8.138. The final, signed SoCG between the Applicant and Natural England [AS-050] confirms there are no outstanding issues with the outline LBMP. The final version of the outline LBMP is revision E [REP7-013].

Our findings in relation to AEoI of marsh harrier of the Swale SPA

- 9.8.139. The Proposed Development would result in a change from growing crops in the arable fields to the presence of solar panels and the energy storage facility, which potentially reduces the area available for foraging marsh harriers. However, the arable fields are located outside the boundary of The Swale SPA and are not favoured foraging habitat, with marsh harriers mostly recorded foraging along the ditch and grassland strips at the edges of the arable fields and throughout the coastal grazing marsh and reedbed strip just inland of the sea wall [REP7-011].
- 9.8.140. The Applicant concluded there would be no AEoI on marsh harrier of The Swale SPA [REP7-011]. This conclusion relies on measures set out in the outline LBMP and secured through the DCO, which have been discussed and refined during the Examination. Additional evidence has been provided [REP17-013] to support the conclusion that the loss of part of the supporting habitat (even in the worst-case scenario of marsh harriers not foraging in the corridors of reedbed and grassland habitat between the solar array fields) would not lead to an AEoI of the marsh harrier SPA population.
- 9.8.141. The conservation objectives for The Swale SPA includes maintaining or restoring the extent and distribution of the habitats of the qualifying features. We consider that the potential loss of 292ha of low-value arable foraging habitat, which is not located within the European site itself, is sufficiently small in materiality in the context of the total available foraging area that the conservation objectives of The Swale SPA would not be undermined.
- 9.8.142. On the basis of the information before us, having regard to the measures secured through the Recommended DCO and the views of Natural England as the Statutory Nature Conservation Body, we are of the view that habitat loss or change as a result of the Proposed Development would not result in an AEoI of marsh harrier of the Swale SPA, either alone or in-combination with other plans or projects. We note that this conclusion is shared by Natural England, as confirmed in [REP7-109] and [AS-050]. We acknowledge that Kent Wildlife Trust disagrees with this conclusion [REP17-009] but consider that the available information adequately supports our findings.

Noise Disturbance of Birds, Outline Special Protection Area Construction Noise Management Plan and Outline Breeding Bird Protection Plan

- 9.8.143. The Applicant's assessment of potential AEoI as a result of noise and visual disturbance to breeding and non-breeding birds during construction and decommissioning of the Proposed Development (and the proposed approach to mitigating such impacts) is presented in section 6.1.1 of the RIAA [REP7-011]. Subject to mitigation measures including the SPA CNMP, the RIAA concludes that there would be no AEoI of the qualifying features of The Swale SPA and Ramsar site in this respect.

- 9.8.144. The matter is discussed at paragraphs 4.2.148 to 4.2.154 of the RIES [PD-010]. Natural England ([RR-826] and [REP2-096]) raised concerns that the measures in the outline SPA CNMP (revision A, [APP-243]) were not sufficient to be certain that adverse impacts on birds from noise disturbance would be avoided at high tide.
- 9.8.145. At Deadline 3, the Applicant submitted a revised outline SPA CNMP ([REP3-008], superseded by [REP7-019]) and outline BBPP (Appendix B, [REP3-006], superseded by [REP7-015]) with the aim of addressing Natural England's concerns. The revisions included timing restrictions on piling to avoid disturbance to birds using the high tide roost at Castle Coote. These were also reflected in the Applicant's revised RIAA submitted at Deadline 7 (revision B, [REP7-011]).
- 9.8.146. At Deadline 5, Natural England confirmed [REP5-050] it was satisfied that the revised versions of the outline SPA CNMP and outline BBPP submitted by the Applicant at Deadline 3 took account of the concerns raised in [RR-826] and [REP2-096]. In particular, Natural England considered that these documents now addressed its previous concerns regarding noise contours and measures to avoid construction noise disturbance in particularly sensitive parts of the designated sites, including Castle Coote [REP5-050].
- 9.8.147. Therefore, Natural England confirmed it was satisfied that the SPA CNMP and BBPP contain clear and sufficient measures to avoid an AEoI of the qualifying features of The Swale SPA and Ramsar site from construction disturbance ([REP5-050] and [AS-050], Table 3).

Our findings in relation to AEoI as a result of noise disturbance

- 9.8.148. On the basis of the information before us, and having regard to the measures secured through the outline SPA CNMP [REP7-019] and outline BBPP [REP7-015] and the view of Natural England, we consider that there will be no AEoI of the qualifying features of The Swale SPA and Ramsar site as a result of construction noise disturbance.

Hydrological Changes and Dust Emissions

- 9.8.149. The Applicant's assessment of potential AEoI as a result of hydrological change and dust emissions during construction and decommissioning of the Proposed Development is presented in sections 6.1.3 and 6.1.4 of the RIAA [REP7-011]. Subject to mitigation measures set out in the outline CEMP, the RIAA concludes that there would be no AEoI of the qualifying features of The Swale SPA and Ramsar site in this respect.
- 9.8.150. Further to its agreement regarding impacts from construction disturbance, Natural England has confirmed [REP5-050] it is content that the CEMP ([REP3-006], as superseded by [REP7-015]) contains sufficient mitigation measures to avoid an AEoI from other construction impacts, including dust and water quality.

Our findings in relation to AEoI as a result of hydrological changes and dust emissions

- 9.8.151. On the basis of the information before us and having regard to the measures secured through the outline CEMP [REP7-015] and the views of Natural England, we are of the view that there will be no AEoI of The Swale SPA and Ramsar site from dust and hydrological changes during construction.

Decommissioning

- 9.8.152. The RIAA explains that increased extents of undisturbed habitat will become available as the decommissioning phase progresses [REP7-011]. It is stated that noise levels during decommissioning would be lower and occur over a shorter time period than the noise levels during construction, with noise levels to be controlled through a decommissioning plan [APP-026].
- 9.8.153. An outline DRP has been provided ([APP-206], superseded by [REP6-010]). In response to ExQ1.4.24 [PD-004], the Applicant confirmed [REP2-006] that measures in the outline DRP are required to conclude no AEoI of The Swale SPA and Ramsar site during decommissioning of the Proposed Development. The Applicant considers that the outline DRP '*..... provides the mechanism by which there can be certainty that control measures will be implemented during decommissioning to prevent significant effects of noise disturbance, dust and hydrological changes to SPA breeding and wintering birds*' [REP2-006].
- 9.8.154. Natural England confirmed [REP3-082] that it had no comments on the scope and content of the outline DRP. The Applicant asserts that Natural England's agreement regarding construction impacts [REP5-050] is applicable to decommissioning; this position was reported in the RIES [PD-010] and was not disputed by Natural England.

Our findings in relation to AEoI as a result of decommissioning

- 9.8.155. On the basis of the information before us, having regard to the measures secured through the outline DRP [REP6-010], we are of the view that there will be no AEoI on the qualifying features of The Swale SPA and Ramsar site as a result of decommissioning of the Proposed Development.

9.9. OVERALL HRA CONCLUSIONS

- 9.9.1. We have carefully considered all the HRA-related information presented before and during the Examination, including the Applicant's RIAA, the RIES and the subsequent representations on it made by IPs. We posed Written Questions [PD-004], [PD-008] and [PD-009] on matters where further explanation and clarification was required from the Applicant and IPs. We have taken into account the responses received, as well as the information in the signed SoCGs between the Applicant and Natural England [APP-256] and [AS-050] and the Applicant and Kent Wildlife Trust [REP17-009].

- 9.9.2. Having considered that information and taking into account the advice from Natural England and the mitigation secured through the Recommended DCO, we are satisfied that the Proposed Development would not lead to an AEoI, either alone or in-combination with other plans or projects, on the qualifying features of any European site.
- 9.9.3. It is our judgement that there is sufficient information provided to enable the SoS as competent authority to conduct, if necessary, an appropriate assessment of the effects of the Proposed Development on European sites. Our assessment in this chapter and the information in the RIES will assist the SoS in this task.

10. CONCLUSION ON THE CASE FOR DEVELOPMENT CONSENT

10.1. INTRODUCTION

10.1.1. The statutory framework for deciding NSIP applications where there is no relevant designated National Policy Statement (NPS) is set out in section (s)105 of the Planning Act 2008 (PA2008). In deciding the Application, the Secretary of State (SoS) must have regard to:

- any Local Impact Report (LIR) submitted before the deadline specified under s60(2) of the PA2008;
- any matters prescribed in relation to development of the description to which the Application relates; and
- any other matters which the SoS thinks are both important and relevant to the SoS's decision.

10.1.2. Our conclusions on this case for the granting of Development Consent are based on an assessment of those matters which we consider are both important and relevant to the decision, as well as the submitted LIRs. We have drawn on the analysis of planning policy in Chapter 4, the planning issues in Chapters 5 to 8 and the Habitats Regulations Assessment (HRA) in Chapter 9 of our Report.

10.1.3. In light of our conclusion on the case for Development Consent in this chapter, Chapter 11 focuses on the Applicant's proposals for Compulsory Acquisition and related matters, followed by consideration of the draft Development Consent Order (dDCO) in Chapter 12. We reach an overall recommendation as to whether or not Development Consent should be granted for the Application in Chapter 13.

10.2. FINDINGS AND CONCLUSIONS

10.2.1. This section summarises the conclusions reached in Chapter 5 (Findings and conclusions in relation to meeting energy need), Chapter 6 (Findings and conclusions in relation to landscape and visual effects), Chapter 7 (Findings and conclusions in relation to biodiversity and nature conservation), Chapter 8 (Findings and conclusions in relation to the remaining planning issues), and Chapter 9 (Findings and conclusions in relation to Habitats Regulations Assessment). We have not included references in this summary, since the full references are in the corresponding sections of Chapters 4 to 9.

Policy justification for the Proposed Development

10.2.2. We consider that the Proposed Development reflects the objectives of NPS EN-1 and NPS EN-5 having particular regard to the Government's policies on sustainable development, notably by mitigating and adapting to climate change and contributing to a secure, diverse and affordable energy supply. NPS EN-1 recognises the benefits of a diverse mix of power generation and the role of energy storage as one of the potential means that could be used to compensate for the intermittency of

renewable energy generation. The Proposed Development Site has ready access to a grid connection which is recorded as an important consideration.

- 10.2.3. We also believe that the Proposed Development chimes with the National Planning Policy Framework (NPPF) in terms of planning for climate change and supporting the transition to a low carbon future.
- 10.2.4. In addition, we note that relevant policies in Bearing Fruits 2031: The Swale Borough Local Plan and in the Canterbury District Local Plan set out 'in principle' support for renewable sources of energy generation.
- 10.2.5. In terms of Local Impact Reports (LIRs), Swale Borough Council pointed to significant climate change benefits arising from the Proposed Development and we find nothing that would favour its intimation for supporting a series of smaller installations. Both Canterbury City Council and Kent County Council, in their respective LIRs, acknowledged the positive benefits of the project qualified by the need to balance any potential adverse environmental impacts.
- 10.2.6. The Climate Change Act 2008 (as amended) places a duty on the SoS to ensure that the net UK carbon account at 2050 is at least 100% lower than the 1990 baseline. We are of the view that the Proposed Development would make an important contribution towards the Net Zero target and the legally binding commitment to end the UK's contribution to climate change. Section 10 of the PA2008 also places a statutory sustainable duty on the SoS and the desirability, *inter alia*, of mitigating and adapting to climate change. The proposed solar PV installation and the energy storage system would be wholly consistent with the Government Response to the Committee on Climate Change set out in '*Leading on Clean Growth*' (October 2019).
- 10.2.7. We also find unequivocal support for the Proposed Development in the UK Solar PV Strategy and the role of large-scale, ground-mounted solar PV installations.
- 10.2.8. Overall, we consider that the Proposed Development is in general accord with the policy support for renewable energy generation and the legal obligation to reduce greenhouse gases. We believe that the policy justification for the Proposed Development weighs very positively in its favour.

EIA considerations

- 10.2.9. The Proposed Development is an Environmental Impact Assessment (EIA) development. Having regard to the requirements of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations), we are satisfied that, by the close of the Examination, the submitted documentation represents a compliant ES and provides an adequate basis for the environmental assessment and identification of significant effects required by the EIA Regulations.

- 10.2.10. In addition, we are content that the final version of the Mitigation Route Map provides sufficient direction and clarity between the Candidate Design and the Outline Design Principles in order to ensure that the details to be approved, as referred to in the Recommended Development Consent Order (DCO) at Appendix C(i), are within the parameters assessed in the EIA. However, we draw the SoS's attention to what we consider to be a remote possibility that the Proposed Development could be built outside the assessed parameters and, if the SoS has any residual concerns on this point, we offer a form of words for substitution in the Recommended DCO at Appendix C(ii).

HRA considerations

- 10.2.11. The Proposed Development is development for which a Habitats Regulations Assessment (HRA) Report (Report to Inform Appropriate Assessment) (RIAA) has been provided. In reaching the overall conclusion and recommendations in this Report, we have considered all documentation relevant to HRA as required by section 4.3 of NPS EN-1, including all HRA-relevant design and mitigation proposals in the ES, as secured through the Recommended DCO.
- 10.2.12. We have also carefully considered the Applicant's RIAA, the Report on Implications for European Sites (RIES) and subsequent representations made by IPs. The SoS is the competent authority under the Habitats and Species Regulations 2017 (the Habitats Regulations) and will make the definitive assessment.
- 10.2.13. Having taken into account the advice from Natural England, and the mitigation secured through the Recommended DCO, we are satisfied that the Proposed Development would not lead to any Adverse Effects on Integrity (AEoI), either alone or in-combination with other projects or plans, on the qualifying features of any European site.
- 10.2.14. We are satisfied that, as a whole, the HRA evidence submitted by the close of the Examination provides an adequate basis on which the SoS can fulfil the duties of competent authority.

Meeting energy need

- 10.2.15. We consider that the Proposed Development is consistent with Government policy, which identifies a need for low-carbon and renewable energy NSIPs in order to address climate change, to meet the legal commitment to Net Zero, and to ensure a secure, diverse and affordable energy supply. Government policy also requires a mix of renewable energy projects, without preference for technology or scale, to achieve these objectives.
- 10.2.16. In support of the Application, we find no 'in principle' objections in terms of the scale, design or layout of the Proposed Development. We are content that other potential locations have been evaluated for the purpose of EIA and found to lack equivalence. It is notable that the Proposed Development Site is well placed to take advantage of spare grid capacity, with ease of connection to the National Electricity Transmission

System (NETS). Further, the Applicant has an extant connection offer, and there is no evidence to show that the Proposed Development would either compromise the operation of the NETS or preclude small-scale, local generation.

- 10.2.17. We also record that the co-location of the battery energy storage system reflects a developing trend that will offer flexibility in operation and maximise energy resources in a balanced and efficient way.
- 10.2.18. Despite concerns expressed by IPs we believe that there is nothing to undermine the Applicant's credibility in its ability to undertake the Proposed Development or its assessment of viability to the extent that might be material.
- 10.2.19. Overall, we attribute substantial weight to the contribution that the Proposed Development, insofar as it relates to the solar PV element, will make towards the identified need for additional renewable energy generation, consistent with local and national policies on sustainable development. We regard the proposed co-located energy storage system to be a factor of significant additional positive weight.

Landscape and visual effects

- 10.2.20. We acknowledge that there will be major and significant adverse landscape effects on a local plan Area of High Landscape Value, though the extent will largely be confined to the immediate area of the Proposed Development. However, there will be no significant effects on any AONBs.
- 10.2.21. We also accept that landscape character, scenic value, recreational value, perceptual aspects, landscape quality and condition, rarity, representativeness and associations will all be adversely affected at, and in the area around, the site.
- 10.2.22. In addition, a few residential properties will experience major and significant impacts on some views, as will users of the Public Right of Way (PRoW) network locally, especially the Saxon Shore Way.
- 10.2.23. Although the Proposed Development Site is extensive, we consider that changes to views away from the immediate area will be reduced by the visual containment of the solar arrays within the site and, from elevated viewpoints further away, the effect of distance, topography and the visual context. We are satisfied that iconic views from the Saxon Shore Way across The Swale towards the Isle of Sheppey and the Thames Estuary will not be directly affected, but walkers will nevertheless be aware of the Proposed Development behind them and the atmosphere and sense of isolation will be affected.
- 10.2.24. We understand how the design of the Proposed Development has evolved to reduce landscape and visual impacts by bringing its boundaries back to the lower-lying ground and increasing buffers to some sensitive receptors. We also note that some limited and appropriate mitigation planting is proposed and, anything more extensive would in itself cause

adverse landscape and visual impacts in the open, expansive landscape. We regard the electrical compounds and associated flood protection bund to be in an appropriate location at the foot of Cleve Hill. It is relevant that all of the adverse effects would be reversible on decommissioning.

10.2.25. In policy terms, NPS EN-1 accepts that virtually all nationally significant energy infrastructure projects will have effects on landscape, and we do not believe any reduction in size would be merited considering the economies of scale that are required to ensure viability and the proportionately small reduction in adverse impact that this would bring.

10.2.26. Overall, we consider that the adverse landscape and visual impacts that we have identified weigh against the Proposed Development. We attach moderate weight to this in the overall planning balance.

Biodiversity and nature conservation

10.2.27. The Proposed Development Site is adjacent to, and partially within, designated areas of very high importance for nature conservation, and itself attracts a good variety of wildlife, including birds from the adjacent protected areas.

10.2.28. We have fully considered biodiversity and nature conservation issues in accordance with NPS EN-1 and given appropriate weight to each of the matters raised in the Application and during the Examination. We have taken full account of the views put to us by the relevant statutory nature conservation body, Natural England. We have also had regard to the Natural Environment and Rural Communities Act 2006 (as amended) (the NERC Act) and the biodiversity duty in coming to our conclusions and in reaching our recommendation.

10.2.29. The ES identified several potential adverse impacts, including some on ecological interest features of European and nationally designated sites. However, the ES concludes that with the proposed mitigation, no significant adverse effects are likely to occur.

10.2.30. We are satisfied that the Applicant's proposals for monitoring and mitigation are properly secured and that they adequately address each of the identified potential impacts on biodiversity and nature conservation, such that there are no residual significant adverse effects. We are also content that the Proposed Development will not add to any significant cumulative effects with other projects and plans.

10.2.31. Overall, with some enhancement and adequate mitigation secured through the Recommended DCO, we consider that the Proposed Development accords with the relevant legislative and policy requirements and we consider this to be a neutral consideration in the overall planning balance.

Cultural heritage

10.2.32. When deciding an application that affects a listed building or its setting, Regulation 3 of the Infrastructure Planning (Decisions) Regulations 2010

requires the decision-maker to have regard to the desirability of preserving the listed building or its setting or any features of special architectural or historic interest which it possesses. In addition, when deciding an application relating to a conservation area, the decision-maker must have regard to the desirability of preserving or enhancing the character or appearance of that area.

- 10.2.33. In accordance with NPS EN-1, the NPPF and relevant development plan policies, great weight is to be given to the conservation of historic assets and any harm to, or loss of, significance of a designated heritage asset should require clear and convincing justification.
- 10.2.34. In our judgement the Proposed Development would not preserve those elements of setting which make a positive contribution to the significance of the following designated heritage assets: All Saints Church, Graveney; Graveney Court and Sparrow Court, Graveney; The Church of St Thomas The Apostle, Harty; and the Graveney Church Conservation Area. The degree of harm, both individually and cumulatively, would be less than substantial.
- 10.2.35. We consider that there would be no harm, either individually or cumulatively, to the significance of other designated heritage assets. However, a World War 2 (WWII) pillbox within the Proposed Development Site, a non-designated heritage asset, would experience a substantial loss of significance as a result of development within its setting, but some benefit would arise from its use as a bat roost with ongoing management to secure the preservation of the building. The overall level of harm would be moderate.
- 10.2.36. We are satisfied that potential archaeological assets within the Proposed Development Site would be investigated, recorded and safeguarded through *in-situ* preservation where justified. We do, however, confirm that the Proposed Development would cause harm to the historic landscape character to which we attach moderate weight.

Agricultural land

- 10.2.37. The only material point of contention in relation to agricultural land during the Examination was the Agricultural Land Classification (ALC) grading of the Proposed Development Site. In this regard, we are satisfied that the Applicant's ALC report, as updated during the Examination, is a robust assessment of the soils and ALC at the Proposed Development Site, and that the vast majority falls into ALC Grade 3b.
- 10.2.38. Therefore, the Proposed Development accords with relevant policy in NPS EN-1 and the local plan as it avoids significant impacts on the best and most versatile agricultural land. Thus, we give little weight to the loss of poorer quality agricultural land of ALC Grade 3b and find this to be neutral in the planning balance.

Traffic and transport

- 10.2.39. We do not underestimate the identified temporary significant effects during construction and decommissioning but find that these would be appropriately mitigated by measures to be approved in the Construction Transport Management Plan (CTMP) and the Decommissioning and Restoration Plan (DRP) secured by the Recommended DCO.
- 10.2.40. We are satisfied that there would be no material adverse impacts on highway safety, no permanent damage would occur to the character of rural lanes and there would not be any severe residual impacts. Thus, the Proposed Development would be compliant with NPS EN-1, the NPPF and relevant development plan policy. We do however recognise that the temporary effects on the local population, in particular, are a minor negative factor to be considered in the planning balance.

Noise and vibration

- 10.2.41. We are satisfied that the Applicant has adopted a robust, consistent, reasonable and proportionate approach to the assessment of noise and vibration and has made appropriate proposals for necessary mitigation in compliance with NPS EN-1.
- 10.2.42. We accept that the Proposed Development would lead to adverse impacts in terms of operational noise and vibration, but this would be capable of being mitigated appropriately. The adverse effects associated with construction and decommissioning would be temporary.
- 10.2.43. In policy terms, the Proposed Development would accord with NPS EN-1 and NPS EN-5, it would be compliant with the NPPF and related guidance in relation to noise and any associated impacts, and it would be consistent with relevant development plan policies. We therefore find this to be a neutral factor in the final planning balance.

Socio-economic effects

- 10.2.44. We are satisfied that the Applicant has considered all relevant potential socio-economic impacts associated with the Proposed Development in accordance with NPS EN-1. In addition, appropriate construction mitigation measures would be secured through the outline Public Rights of Way Management Plan (PRWMP) within the outline Construction Traffic Management Plan (CTMP), consistent with NPS EN-1.
- 10.2.45. In terms of local employment opportunities, we consider that only minor economic benefits would be generated by the Proposed Development. We also believe that the impact on the tourism economy would be minimal and reversible. In our view, the Proposed Development accords with relevant local plan policy in respect of safeguarding tourism and providing some localised employment opportunities.
- 10.2.46. In our opinion, following the implementation of the mitigation measures in the outline CTMP, the potential for any inequality and discrimination would be minimised and the Public Sector Equality Duty would be met.

- 10.2.47. Overall, in terms of socio-economic effects, we find limited harm as a result of the loss of amenity to users of local PRowS.

Water environment

- 10.2.48. We find that the Proposed Development is compliant with the Water Framework Directive (WFD). It is policy compliant in relation to flood risk and the management of coastal change and associated risks have been adequately addressed.
- 10.2.49. We conclude that the construction, operational and decommissioning impacts and risks to the water environment have been addressed and the overall effect of the Proposed Development on water quality is likely to be positive due to a reduction in intensity of agricultural practices on the site. Nonetheless, we consider this to be neutral in the planning balance.

Safety and security

- 10.2.50. With regard to the energy storage system, there is raft of legislation and guidance in place, and regulatory bodies would have a role to play in the design, regulation, approval and ongoing supervision of the energy storage system. We are confident that risk will be managed and mitigated through the safeguards and checks during final design, installation and thereafter in operation and secured in the Recommended DCO.
- 10.2.51. Irrespective of the concerns expressed, we find no compelling evidence to show why consent should be withheld for the proposed energy storage system. Overall, we are satisfied that the Applicant has provided a sound and enforceable basis of managing and mitigating safety risk and there is no compelling evidence to the contrary.
- 10.2.52. In terms of site security, we have not been provided with any evidence to lead us to conclude that more stringent security measures are necessary.
- 10.2.53. Overall, we are content that the information and analysis provided satisfies the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 in respect of major accidents and disasters.
- 10.2.54. In light of the above, we consider safety and security considerations to be neutral in the overall planning balance.

10.3. THE DEVELOPMENT BALANCE

- 10.3.1. In this chapter, we have summarised the conclusions reached in earlier chapters. The purpose of this section is to draw together our analysis in reaching a recommendation as to whether the case is made for granting Development Consent for the Proposed Development.
- 10.3.2. Firstly, and very significantly, the Proposed Development would meet the policy and legislative imperatives to secure decarbonisation and the commitment to end the UK's contribution to climate change. The case for meeting energy need is very strong. We attribute substantial weight to

the benefits arising from the solar PV element of the Development and the proposed co-located battery energy storage system is a factor of significant additional positive weight.

- 10.3.3. On the other side of the equation there are a number of adverse impacts that weigh against the Order being made.
- 10.3.4. The Proposed Development would result in significant but localised adverse landscape and visual effects which we consider to be a factor of moderate weight. We also recognise that there would be loss of amenity to users of local PRowS to which we attach limited weight. Although traffic and transport matters do not weigh heavily against the Order being made, we acknowledge that the temporary effects on the local population, in particular, are a minor negative factor to be weighed in the balance.
- 10.3.5. In addition, there would be adverse effects on the setting of designated heritage assets, notably: All Saints Church, Graveney; Graveney Court and Sparrow Court, Graveney; The Church of St Thomas The Apostle, Harty; and the Graveney Church Conservation Area. Great weight is to be given to the conservation of historic assets. We also find there would be harm to the setting of a non-designated heritage asset and harm to historic landscape character to which we attach moderate weight in each case.
- 10.3.6. In terms of biodiversity and nature conservation, the ES identified several potential adverse impacts and concluded that with the proposed mitigation no significant adverse effects are likely to occur. The Proposed Development includes some biodiversity enhancements. We consider that the Proposed Development, with adequate mitigation secured through the Recommended DCO, accords with the relevant legislative and policy requirements. We find this to be a neutral factor in the overall planning balance.
- 10.3.7. There are also a number of issues which do not weigh against the Order being made including:
- the loss of agricultural land;
 - noise and vibration;
 - social economic and land use effects (with the exception recreational users);
 - the water environment; and
 - safety and security.
- 10.3.8. As set out earlier in our report and with particular reference to paragraph 10.1.1 above, the application falls to be decided under s105 of the PA2008. Section 105(2) requires the SoS to have regard to any LIR submitted to the SoS before the specified deadline for submission, any matters prescribed in relation to development of the description to which the application relates, and any other matters which the SoS thinks are both important and relevant to the decision. The SoS also has a statutory sustainable development duty, under s10 of the PA2008, to have regard to mitigating and adapting to climate change.

- 10.3.9. We conclude that none of the matters telling against the development, either in isolation or in combination, irrespective of whether the Proposed Development takes the form of a solar PV array and energy storage system, or whether the energy storage system is omitted in favour of an extension to the array, outweigh the significant benefits that we have described.
- 10.3.10. Moreover, we are fully satisfied that all adverse effects would be mitigated as far as possible through controls secured through the Recommended DCO and that the identified adverse effects would be of time-limited duration and reversible.
- 10.3.11. Considering the identified adverse effects as a whole and where there are related conflicts with policies in the development plan, we consider that the final balance points strongly in favour of granting Development Consent.

10.4. OVERALL CONCLUSION ON THE CASE FOR DEVELOPMENT

- 10.4.1. In our judgement, the local, national and global benefits to be gained from the Proposed Development in terms of its contribution to decarbonising electricity generation and addressing climate change are such that they outweigh the adverse impacts that are identified above in relation to the construction, operation and decommissioning of the Proposed Development.

11. COMPULSORY ACQUISITION AND RELATED MATTERS

11.1. INTRODUCTION

11.1.1. The Application included proposals for the Compulsory Acquisition (CA) and Temporary Possession (TP) of land and rights over land. This chapter records the Examination of those proposals and related issues.

11.2. LEGISLATIVE REQUIREMENTS

11.2.1. CA powers can only be granted if the conditions set out in section (s)122 and s123 of the Planning Act 2008 (PA2008), together with relevant guidance in '*Guidance Related to Procedures for the Compulsory Acquisition of Land*' (the former Department for Communities and Local Government (DCLG), September 2013) (the DCLG CA Guidance) are met.

11.2.2. Section 122(2) of the PA2008 requires that the land subject to CA must be required for the development to which the development consent relates or must be required to facilitate or be incidental to the development. In respect of land required for the development, the land to be taken must be no more than is reasonably required and be proportionate.

11.2.3. Section 122(3) of the PA2008 requires that there must be a compelling case in the public interest to acquire the land, which means that the public benefit derived from the CA must outweigh the private loss that would be suffered by those whose land is affected. In balancing public interest against private loss, CA must be justified in its own right.

11.2.4. Section 123 of the PA2008 requires that one of three procedural conditions in subsections (2) to (4) must be met by the application proposal, namely:

(2) The condition is that the application for the order included a request for compulsory acquisition of the land to be authorised.

(3) The condition is that all persons with an interest in the land consent to the inclusion of the provision.

(4) The condition is that the prescribed procedure has been followed in relation to the land.

11.2.5. A number of general considerations also have to be addressed, either as a result of following the applicable guidance or in accordance with legal duties on decision-makers:

- all reasonable alternatives to CA must have been explored;
- the applicant must have a clear idea of how it intends to use the land subject to CA powers;

- the applicant must be able to demonstrate that funds are available to meet the compensation liabilities that might flow from the exercise of CA powers; and
- the decision-maker must be satisfied that the purposes stated for the CA are legitimate and sufficiently justify the inevitable interference with the human rights of those affected.

11.2.6. Further to Part 1 of Schedule 5 to the PA2008, at paragraph 2, TP powers are capable of being within the scope of a DCO. The PA2008 and the DCLG CA Guidance do not contain the same level of specification and tests to be met in relation to the granting of TP powers as, by definition, such powers do not seek to permanently deprive or amend a person's interests in land.

11.2.7. The Neighbourhood Planning Act 2017 (NPA2017) has been enacted and contains provisions that amount to a codification of new TP practice. In recognition of the greater extent to which TP is being sought by scheme promoters, and of the extended durations for which TP can be sought, the NPA2017 provisions in general terms provide for enhancements to the rights of Affected Persons (APs) subject to TP. This is with a view to ensuring that they have equivalent or proportionate rights to notice and to relevant compensation to those already available to APs subject to CA. However, at the close of the Examination the relevant provisions had not yet commenced.

11.2.8. All relevant legislation and guidance are taken into account in the reasoning below and relevant conclusions are drawn at the end of this chapter in relation to both CA and TP.

11.3. THE REQUEST FOR CA AND TP POWERS

11.3.1. The Application draft Development Consent Order (dDCO) [APP-016] and all subsequent versions submitted up to the latest dDCO revision [REP17-003] included provisions intended to authorise CA and TP of both land and rights.

11.3.2. On this basis, the Application was accompanied by a Book of Reference (BoR) [APP-021], Land Plan [APP-006], a Statement of Reasons (SoR) [APP-019] and a Funding Statement [APP-020]. Taken together, these documents set out the land and rights sought by the Applicant together with the reasons for their requirement and the basis under which compensation would be funded.

11.3.3. As is normal, the Examination and due diligence processes led to changes to some of this documentation. These generally reflect minor updates in terms of, for example, the nature of interests and the identity of lessees, tenants and occupiers and they do not change the nature of, and the justification for, the CA and TP powers sought. By the close of the Examination, the most up-to-date versions were as follows:

- BoR (version D) [REP7-009] (clean) and [REP7-010] (tracked) and Schedule of Changes to BoR [REP7-034];
- Land Plan Revision B [AS-003];

- SoR [APP-019] - Updates to Appendix A of SoR [REP7-035] and [REP17-011];
- Funding Statement [APP-020];
- Updated CA Schedule [REP7-032] (clean) and [REP7-033] (tracked); and
- dDCO (revision I) [REP17-003] (clean) and [REP17-004] (tracked from revision A).

11.3.4. These documents taken together form the basis of the analysis in this chapter. References to the BoR and the Land Plans in this chapter from this point should be read as references to the latest revisions cited above unless stated to the contrary.

11.3.5. Land over which CA powers are sought is referred to in this chapter as the Order land. The Applicant [REP17-010] has confirmed that:

'The Applicant has made significant progress in coming to agreement with many of the persons affected by the application for powers of compulsory acquisition and has reached agreement with 91% of all parties.'

11.4. THE PURPOSES FOR WHICH LAND IS REQUIRED

11.4.1. The purposes for which the CA powers are required were set out in the Applicant's SoR [APP-019] and the accompanying BoR [APP-021]. In general terms, CA was sought for *'so much of the Order land as is required for the authorised development or to facilitate, or is incidental to it.'*

11.4.2. The SoR explained ([APP-019], paragraph 6.7) that the Applicant had an option agreement with the landowners for the acquisition of the freehold of the land on which the Proposed Development would be located (Plot Nos. 1/04, 1/05, 2/04, 3/04, 3/05, 3/09, 4/07, 5/01 and 5/03). Although not listed in the text, Appendix A of the SoR included Plot 5/02 as within the Applicant's option agreement. This is confirmed in the Updates to Appendix A of the SoR [REP17-011]. These plots were identified as land to be used for the solar arrays, energy storage facility, habitat management areas, electrical connection and site access and were recorded as Work Nos. 1, 2, 3, 4 and 6. It should be noted that works to create and maintain the habitat management areas comprise Work No. 8. The acquisition of all interests are sought.

11.4.3. Appendix A of the SoR [APP-019] also listed the acquisition of all interests in relation to Plot 3/06A. This would facilitate access (Work No. 6) connecting Work Nos. 1, 2, and 3 with the existing access road in Work No. 7. The same Appendix included the acquisition all interests in Plot 3/05 (subsoil) below a depth of 0.7m relating to rights granted to National Grid Electricity Transmission plc. This would include Work Nos. 7 and 8 in terms of access and land within a proposed Habitat Management Area.

11.4.4. In terms of the acquisition of interests (including restrictions), which were sought under Article 18 of the dDCO, these were set out in Table 1

of the SoR [APP-019] and Schedule 5 of the dDCO [APP-016]. With reference to the Applicant's final version of the dDCO [REP17-003], Plot Nos. 3/06, 3/06B, 3/07, 3/07A, 3/07B, 3/08 and 3/08A relate to Work No. 5. Plots 3/06, 3/10, 3/12 and 3/13 include Work Nos. 7 and 9; and Plot No. 3/11 involves Work No. 8.

- 11.4.5. In relation to Work No. 9 the following additional Plot Nos. are included:- 1/01, 1/02, 1/03, 1/06, 1/07, 1/08, 1/09, 1/10, 2/01, 2/02, 2/03, 2/05, 2/06, 2/07, 2/08, 2/09, 2/10, 2/11, 2/12, 2/13, 2/14, 2/15, 2/16, 2/17, 2/18, 2/19, 2/20, 2/21, 2/22, 2/23, 2/24, 2/25, 2/26, 2/27, 2/28, 3/01, 3/01A, 3/01B, 3/02, 3/02A, 3/02B, 3/03, 3/03A, 3/03B, 3/10, 3/11, 4/01, 4/02, 4/03, 4/04, 4/05 and 4/06.
- 11.4.6. Plot Nos. 1/02, 2/05, 2/06, 2/08, 2/10, 2/12, 2/14, 2/16, 2/18, 2/20, 2/22, 2/24, 2/26, 2/28, 3/01, 3/01A and 3/01B contain Crown Interests ([APP-012] and [REP7-009], Part 4: Crown Land Interests) which are to be excluded from the acquisition rights.
- 11.4.7. Part 5 of the BoR [REP7-009] sets out Special Category Land (Open Space) with reference to Plot Nos. 1/01(part), 1/02, 1/06, 1/07, 1/08 (part), 1/09, 1/10, 2/01 (part), 2/05, 2/06, 2/07, 2/08, 2/09, 2/10, 2/11, 2/12, 2/13, 2/14, 2/15, 2/16, 2/17, 2/18, 2/19, 2/20, 2/21, 2/22, 2/23, 2/24, 2/25, 2/26, 2/27, 2/28, 3/01, 3/01A, 3/01B, 3/02 (part), 3/02A (part), 3/02B (part), 3/10 (part), 4/01, 4/02 and 4/03 (part).
- 11.4.8. In terms of the dDCO [REP17-003], Article 20 applies the vesting procedures in the Compulsory Purchase (Vesting Declarations) Act 1981 to the exercise of CA powers pursuant to the Order. It gives the Undertaker the option to acquire land via the process set out under the 1981 Act, rather than the notice to treat procedure. This article has been updated to incorporate and reflect the changes brought about by the Housing and Planning Act 2016.
- 11.4.9. Article 22 (Modification of Part 1 of the Compulsory Purchase Act 1965) modifies the provisions of Part 1 of the Compulsory Purchase Act 1965 as applied to the Order by s125 of the PA2008. This provision reflects recent changes introduced by the Housing and Planning Act 2016. Paragraphs (1) to (3) amend the provisions of the Compulsory Purchase Act 1965 so they are consistent with the terms of the Order and paragraph (4) makes it clear that the notice periods introduced by the Housing and Planning Act 2016 do not apply to the temporary possession (TP) or use of land under Articles 22 or 23 of the Order.
- 11.4.10. Article 24 relates to the temporary use, for project specific activities, of any part of the Order land for carrying out the authorised development. It includes:
- a time limit for occupation;
 - prior notice of occupation;
 - restoration of the land other than where certain are to be retained; and
 - compensation provisions.

- 11.4.11. Article 25 is for the temporary use of land for maintaining the authorised project. It allows the Undertaker to take temporary possession of land within the Order limits if reasonably required to maintain the project and to construct temporary works and buildings. It contains similar restrictions to Article 24.
- 11.4.12. The Explanatory Memorandum [APP-018] accompanying the Application confirmed that Work No. 1, being a ground-mounted solar PV generating station in excess of 50MW, would be an NSIP. Work No. 2 provided for an energy storage facility of more than 50MW, which would be an NSIP in its own right, or an extension to the solar park that would be an NSIP when combined with Work No. 1. Work Nos. 3 to 9 were described as Associated Development.

11.5. EXAMINATION OF THE CA AND TP CASE

- 11.5.1. The examination of the Application included consideration of all submitted written material relevant to CA and TP and ongoing revisions and updates. Two Compulsory Acquisition Hearings (CAHs) ([EV-004] and [EV-024]) were held together with unaccompanied and accompanied inspections of land subject to CA and TP requests ([EV-002] and [EV-010]). These processes are described below.

Written Process

- 11.5.2. Two Relevant Representations (RRs) raised objections in relation to CA and TP.
- 11.5.3. Charles Russell Speechlys LLP on behalf of London Array Limited (on behalf of specified participants namely: a consortium of Orsted London Array II Limited, E.ON Climate & Renewables UK London Array Limited, Masdar Energy UK Limited, and Boreas (Investment) Limited) [RR-807]:
- the participants owned soil below 0.7m in an area proposed for CA and cable runs essential for the operation of the London Array wind farm and rights over the top soil to facilitate management of this equipment (plot 3/05);
 - there were substations located on land over which the acquisition of rights was proposed (plot 3/07A);
 - access for construction over a private road owned by the participants might affect the operation and maintenance of the existing substation; and
 - works to the flood defences owned by the participants, and over which the participants enjoy rights, might affect their integrity.
- 11.5.4. National Grid Electricity Transmission plc [RR-825]:
- the representation was made in order to protect National Grid's rights to retain its apparatus *in situ* and rights of access thereto.
- 11.5.5. A number of other RR's drew attention to various interests (actual and perceived) in the Order land (including [RR-055], [RR-056], [RR-443], [RR-473], [RR-703], [RR-764], [RR-798], [RR-799] and [RR-826]). None

of these were pursued as formal objections. The Applicant submitted a summary of the status of negotiations shortly before the close of the Examination [REP7-032].

Hearings

- 11.5.6. These Hearings [EV-004] and [EV-024] were held to orally examine objections, the Applicant's case for CA and TP powers and to seek updates on negotiations. No APs or others with potential interests made oral representations.

Site Inspections

- 11.5.7. An unaccompanied site inspection [EV-002] together with an accompanied site inspection [EV-010] provided us with an understanding of the location and condition of land parcels proposed to be subject to CA and TP powers.

Consideration of CA and TP Issues: The Applicant's Case

This section sets out the Applicant's general case for CA and TP. Consideration of particular objections are in the following section. The SoR [APP-019] set out the requirement for the land. The Planning Statement [APP-254] provided a justification for the Proposed Development against Bearing Fruits 2031: The Swale Borough Local Plan and other relevant national and local policies. A summary of the key conclusions of the Planning Statement was also set out in the SoR. The Applicant's Statement of Need [APP-253] was also relevant.

- 11.5.8. In the SoR [APP-019], the Applicant confirmed that it had addressed the general considerations that the DCLG CA Guidance indicates should be demonstrated to justify the powers sought as follows:
- reasonable alternatives to CA and TP had been explored;
 - the Applicant had a clear idea of how it intended to use the land;
 - the proposed acquisition was legitimate, proportionate and necessary;
 - there was a compelling case in the public interest;
 - there was funding for the acquisition; and
 - the interference with Human Rights was proportionate and justified.
- 11.5.9. Each of these is set out in turn immediately below with the exception of the Human Rights Act 1998 which is considered in paragraphs 11.5.63 – 11.5.68.

Have reasonable alternatives to CA and TP been explored?

- 11.5.10. Section 2 of the SoR [APP-019] explained why the Applicant considered that it was necessary to acquire land; acquire or create rights and impose restrictions over land; override, suspend or extinguish rights over land; and to temporarily use land for the purposes of the project, if necessary, by compulsion. It also explained the reasons for the inclusion of CA and related powers in the Order and set out why, in the Applicant's

opinion, there was a clear and compelling case in the public interest, in accordance with s122 of the PA2008, for the Order to include such powers.

- 11.5.11. Section 3 provided details of the Applicant. Section 4 explained, in short, that the Proposed Development consisted of a solar array and an energy storage facility. Associated Development included:
- a substation and electrical connection;
 - a network of cables, landscaping, earthworks, drainage and undergrounding an existing overhead line;
 - a habitat management area;
 - creation and maintenance of vehicular access; and
 - maintenance of an existing flood defence.
- 11.5.12. Section 6 explained the need for CA powers. The intended purpose for which new rights were sought was set out in Table 1 and the status of negotiations at the time of the Application was contained in Appendix A of the SoR [APP-019]. This was updated, in final form, shortly before the close of the Examination [REP17-011].
- 11.5.13. The background to the project was set out in sections 7 and 8 of the SoR [APP-019] and more fully in the Statement of Need [APP-253] and Planning Statement [APP-254]. These documents indicated that the Proposed Development would provide a cost-effective contribution to decarbonising the UK's electricity sector; it would provide energy security through diversity in supply; it would be an asset to the management and operation of the National Electrical Transmission System (NETS) through its energy storage facility; and the Proposed Development would lower costs to consumers.
- 11.5.14. The Applicant explained that a number of studies had been undertaken to determine the most suitable location for a project of the scale proposed. The extent of land and rights had been carefully considered and designed in order to take the minimum amount of land required.
- 11.5.15. Although the Applicant had an option agreement for the Proposed Development Site (Plot Nos. 1/04, 1/05, 2/04, 3/04, 3/05, 3/09, 4/07, 5/01, 5/02 and 5/03), this land had been included within the Order land to ensure that land assembly and title could be secured with certainty. It would also have the effect of extinguishing easements and other private rights identified as affecting that land. Together, this would allow the construction and operation of the project without hindrance. In addition, there could be unknown rights, restrictions, easements or servitudes affecting that land which also needed to be overridden, removed or extinguished for the same reason.
- 11.5.16. The Applicant had endeavoured to acquire the remaining land, rights and restrictions over land by voluntary agreement, but this had not been achieved at the time of submitting the DCO Application. In addition, the Applicant required certain rights to be suspended, overridden or extinguished within the Order land so as to ensure there were no

impediments to the construction, operation and maintenance of the project.

- 11.5.17. This approach of making the application for powers of CA in the DCO Application and, in parallel, conducting negotiations to acquire land by agreement, accorded with paragraph 26 of the DCLG CA Guidance.
- 11.5.18. Overall, the Applicant was satisfied that the conditions of s122 of the PA2008 had been met.
- 11.5.19. In terms of the choice of the site and the design of the Proposed Development, the Applicant had considered other locations and adopted an iterative approach to design to minimise the potential land take [APP-034]. The Consultation Report [APP-022] explained further how community and statutory consultees and negotiations with landowners had influenced considerations as to the design and layout of the project. None of the alternatives or modifications considered would obviate the need for the powers sought.

Does the Applicant have a clear idea of how it intends to use the land?

- 11.5.20. The SoR [APP-019] and the Work Plans [APP-007] recorded what each plot would be used for. The Land Plans (Revision B) [AS-003] showed the location of each plot and the respective rights sought for the CA of land (coloured pink) or rights over land (coloured blue). The entire Order land was subject to TP.

Is the proposed acquisition legitimate, proportionate and necessary?

- 11.5.21. The SoR [APP-019] confirmed the Applicant's view that the CA of the Order land or rights over the Order land (including restrictions), together with the overriding of interests, rights and restrictive covenants and the suspension or extinguishment of private rights, were required for the purposes of, to facilitate, or were incidental to, the Proposed Development and were proportionate and no more than was reasonably necessary.

Is there a compelling case in the public interest?

- 11.5.22. The Applicant has confirmed that all reasonable alternatives to compulsory acquisition had been explored. In its view, given the national need for the Proposed Development, and the support for it found in policy, the CA of the land and rights and the temporary use of land, together with the proposed interference with existing rights, were necessary and justified. As such the Applicant concluded that there was a compelling case in the public interest for the land or rights over the land to be compulsorily acquired.

Availability and adequacy of funds

- 11.5.23. The Funding Statement [APP-020] indicated that the estimated cost of the Proposed Development would be approximately £450m. This included some £50m land acquisition costs, including compensation payable in respect of any CA. The project would be funded through the Applicant's two parent companies, Hive Energy Ltd. and Wirsol Energy Ltd. The Funding Statement contained audited accounts for Wirsol Energy Ltd for the year ended 31 December 2017.
- 11.5.24. Graveney Rural Environment Action Team (GREAT) [REP7-095] informed us shortly before the close of the Examination that Wirsol Energy Ltd had not filed its annual accounts which were due on 30 September 2019. As a result, it questioned the financial position of the company and the ability to finance the development.
- 11.5.25. In response [REP17-007], the Applicant explained that, although the finalisation of the statutory accounts had been delayed, there would be no resultant impact on the Proposed Development.
- 11.5.26. Whilst it would have been helpful to have the latest accounts to inform our consideration, there is no evidence to suggest that the funding commitments for the Proposed Development have changed. On the basis of the Applicant's reassurance, the evidence is that, if consented, there would be funds for the payment of compensation liabilities for CA and TP and for any blight claims should they arise. The Applicant has not identified any AP who it considers could be eligible to serve such notice.
- 11.5.27. Furthermore, protection for any interests which are to be compulsorily acquired is provided by the inclusion of Article 39 in the Recommended DCO, which requires security in respect of payment of compensation. This would ensure that no CA could be pursued until appropriate security had been provided for the liabilities of the undertaker to pay compensation in respect of acquisition.

Consideration of Individual Objections and Issues

Whether certain works are Associated Development and whether CA powers are justified: ExA's consideration

- 11.5.28. During the course of the Examination, both in our Written Questions ([PD-004], ExQ1.2.5) and at our CAHs [EV-004] and [EV-024], we explored in some detail the rights sought for the maintenance of the existing flood defences (Work No. 9) and three habitat management areas (Work No. 8) and whether the requirements of s122(2) of the PA2008 were satisfied.
- 11.5.29. Looking first at the existing flood defences, as these would no longer be maintained by the Environment Agency, the Applicant sought to take on current day-to-day maintenance responsibilities with related access rights.

- 11.5.30. We are satisfied that the works listed in Work No. 9 in Schedule 1 (The Authorised Development) of the dDCO [REP17-003] amount to engineering operations constituting development. As the stated purpose of the works would be to protect the Proposed Development from flooding, we are content these are Associated Development and the test for CA powers has been met.
- 11.5.31. In terms of the habitat management areas, the Arable Reversion Habitat Management Area is to mitigate for the loss of foraging and roosting habitat for overwintering birds as a result of the loss of arable land in the Proposed Development Site. The Freshwater Grazing Marsh Habitat Management Area adjoins this land and it forms part of the Seasalter Levels SSSI which extends eastwards beyond Seasalter Road.
- 11.5.32. Both of the above habitat management areas are likely to require water control structures and some ground works and temporary access for construction. The comprehensive management of these habitat management areas would be beneficial in terms of managing water levels and providing foraging resources for birds displaced from the area of solar arrays and would provide net biodiversity gain. We are content that these areas have a functional link to the Proposed Development, and, in combination, address identified impacts. As Associated Development, the powers sought are therefore justified.
- 11.5.33. Moving on to the Lowland Grassland Meadow Habitat Management Area, the land in question forms the major part of Plot No. 5/03. The remainder of this plot contains an area of solar arrays bordered by proposed native species hedging (Work Nos. 1 and 4).
- 11.5.34. The Applicant explained that the principal aim of the habitat management area was to establish a grassland sward and scrub with greater ecological value than the existing arable land. No physical works were proposed. We were also told that the land would be a priority habitat reflecting historic land use; it would provide mitigation in views from Graveney Church Conservation Area and its designated heritage assets and also from the public footpath across the plot; and it would also be a component of the wider landscape management plan covering the entire Proposed Development Site.
- 11.5.35. In our view, the primary mitigation of impacts in this area was achieved prior to the submission of the Application by deleting solar panels from this part of the site. The habitat management area would undoubtedly provide net gains for biodiversity, consistent with the NPPF and '*Green Future: Our 25 Year Plan to Improve the Environment*' (HM Government, 2018) but any additional mitigation to address identified adverse impacts would be at best marginal.
- 11.5.36. DCLG CA Guidance provides an example of the consideration as to whether land is required to facilitate or is incidental to a proposed development:

'..... the acquisition of land for the purposes of landscaping the project. In such a case the Secretary of State will need to be satisfied that the development could only be landscaped to a satisfactory standard if the land in question were to be compulsorily acquired'

- 11.5.37. We are not convinced that this test is met, as the replacement of a grass sward or arable crop by a lowland meadow would not provide any material advantage in terms of the mitigation of identified landscape impacts. Nor does it directly replace any of the habitats that would be lost due to the Proposed Development. Whilst the enhancement of the natural environment is capable of being a relevant consideration in planning decisions, s122 of the PA2008 contains specific tests in relation to the CA of land.
- 11.5.38. In this regard, we do not believe that the Lowland Grassland Meadow Habitat Management Area is required for the development to which the development consent relates (s122 (2)(a)), nor is it required to facilitate or is incidental to that development (s122 (2)(b)). On this basis, we are not satisfied that there is a compelling case in the public interest for the land to be acquired compulsorily (s122(3)).
- 11.5.39. Accordingly, this leads us to the conclusion that the CA of Plot No. 5/03 should only be confirmed insofar as it relates to the areas identified as Work Nos. 1 and 4.
- 11.5.40. In reaching this conclusion, we recognise that the TP powers sought for the temporary use of land for the carrying out, and maintenance of, the Proposed Development, and the related rights, should be granted for the entirety of the Order land, including the totality of Plot No. 5/03. We are satisfied that the ability to undertake and maintain Work Nos. 1 and 4, within this plot, is likely to require temporary and periodic entry/works on that part of the land identified as Work No. 8.
- 11.5.41. We have not canvassed the possibility of the exclusion of Plot No. 5/03 (part) from CA, with either the Applicant or the relevant AP. Therefore, if the SoS agrees with our assessment, and overall Recommendation and determines to make the Order, it will be necessary, before the Order is made, to consult the Applicant to secure revisions to the Land Plan and Book of Reference, including a revised Plot Reference and Description of Land, and for these to be included in the List of Certified Documents. The AP should also be consulted on the accuracy of the revised boundary within Plot No. 5/03, before a final decision is made.
- 11.5.42. In addition, should the SoS determine to make the DCO, it will be necessary to make a corresponding amendment to Schedule 5 of the Recommended DCO 'Land in which only new rights etc., may be acquired'.
- 11.5.43. We also make the point that the affected plot is the subject of an Option Agreement in favour of the Applicant. As such, it would appear that there would be nothing to preclude the Applicant from completing a private legal agreement with the AP to acquire the remainder of the plot; and for

the Applicant to undertake the landscaping works proposed on a voluntary basis.

Charles Russell Speechlys LLP on behalf of London Array Limited (LAL) (on behalf of specified participants namely: a consortium of Orsted London Array II Limited, E.ON Climate & Renewables UK London Array Limited, Masdar Energy UK Limited, and Boreas (Investment) Limited) [RR-807]

- 11.5.44. Interests: rights to be acquired and/or created over Plot Nos. 1/04, 1/05, 2/04, 3/02, 3/03, 3/04, 3/05 (subsoil) 3/06, 3/06B, 3/07, 3/07A, 3/07B, 3/08, 3/08A, 3/09, 3/11, 4/02, 4,03, 4/07, 5/01 and 5/02.
- 11.5.45. Status summary: agreement reached, Protective Provisions agreed for the protection of 'Blue Transmission London Array Limited' (BTLAL) (as owner of the transmission assets between the London Array wind farm and the Cleve Hill substation) and objection withdrawn.
- 11.5.46. The objector's RR [RR-807] was supplemented by Additional Submissions ([AS-019] and [AS-034]) and a Written Representation (WR) [REP1-010] confirming strong concerns regarding the potential adverse impact of the Proposed Development on the offshore windfarm. It was also said that the two parties were in early negotiations with a view to reaching an agreement which would preserve each party's rights. In addition, parallel negotiations might include BTLAL and National Grid. In light of the ongoing discussions, LAL indicated that it did not intend to attend CAH1. We were, however, provided with an update on the progress of these negotiations, by the Applicant, at CAH1 [REP3-013].
- 11.5.47. At Deadline 4 we received a joint submission [REP4-056] on behalf of BTLAL and LAL, confirming that significant progress was being made in negotiations with the Applicant and that all three parties requested further time to complete the agreements and to submit a revised dDCO, as necessary, with Protective Provisions for BTLAL's apparatus. Again, it was indicated that the objector would not attend CAH2 and that the Applicant would outline the latest position [REP5-012].
- 11.5.48. A letter dated 13 November 2019 [REP7-093], on behalf of BTLAL, informed us that the basis of two commercial agreements had been reached between the Applicant and the company. As these were unlikely to be formally completed before Deadline 7, it had been agreed that the Applicant would insert Protective Provisions into the dDCO ([REP7-007] Schedule 7, Part 5) in favour of BTLAL.
- 11.5.49. By letter dated 29 November 2019 [AS-062], we were provided with written confirmation that:

'The terms of commercial agreements, which aim to protect LAL's interests, and provide the Applicant with the interests in land it requires for the proposed development, have been agreed between the Applicant and LAL, and contracts have been exchanged today. Therefore, I confirm that LAL is satisfied that its interests are now protected and withdraws its previous representations to the Examining Authority.'

- 11.5.50. The Applicant has indicated that, should final agreements be completed before the SoS makes a decision on the Order, the Protective Provisions would become superfluous and the SoS would be informed accordingly.

The ExA's considerations

- 11.5.51. Protective Provisions are contained in Schedule 7, Part 5 of the DCO and the objection was formally withdrawn shortly before the end of the Examination. Nonetheless, the rights to be acquired and/or created are necessary to permit the realisation of the Proposed Development and the powers sought would be justified.

National Grid Electricity Transmission Plc [RR-825]

- 11.5.52. Interests: rights to be acquired and/or created over Plot Nos. 1/04, 1/05, 1/07, 1/08, 2/04, 3/03, 3/04, 3/05, 3/07, 3/09, 4/02, 4/03, 4/07, 5/01, 5/02 and 5/03.
- 11.5.53. Status summary: agreement reached on Protective Provisions and objection withdrawn.
- 11.5.54. The RR [RR-825] was updated by reference to an interim SoCG [REP2-030], dated 25 June 2019, and an Additional Submission [AS-036], on 15 July 2019, reporting good progress in agreeing Protective Provisions. The objector did not attend CAH1 or CAH2. The Applicant provided updates on the negotiations at CAH1 [REP3-013] and CAH2 [REP5-012].
- 11.5.55. A letter dated 19 November 2019 [AS-051], confirmed:

'National Grid have now reached an agreement with the promoter in relation to the Protective Provisions included on the face of the Order and other commercial arrangements between the parties. Accordingly, National Grid now withdraws the relevant representation.'

- 11.5.56. The Protective Provisions, as amended, are contained in Schedule 7, Part 2 of the dDCO [REP17-003].

The ExA's considerations

- 11.5.57. Protective Provisions have been agreed and the objection has been withdrawn. However, subject to the exclusion of the area identified as Work No. 8 in Plot 5/03 from the CA provisions, for the reasons given above, we are satisfied that the rights to be acquired and/or created are necessary to permit the realisation of the Proposed Development.

Other particular considerations

Effects on statutory undertakers and other parties with Protective Provisions

- 11.5.58. In addition to the Protective Provisions referred to above, the dDCO contains Protective Provisions in favour of: Electricity, Gas, Water and Sewerage Undertakers (Part 1); Operators of Electronic Communications Code Networks (Part 3); Drainage Authorities (Part 4); and UK Power Networks (UKPN) (Part 6). The latter was inserted into the Applicant's

final dDCO [REP17-003] reflecting agreement between UKPN and the Applicant (for the protection of (i) Electricity, Gas, Water and Sewerage Undertakers and (ii) Blue Transmission London Array Limited) [REP17-012].

Crown land and interests

- 11.5.59. The Crown Estate's interest in the foreshore is set out in Part 4 of the BoR [REP7-009] and on the Crown Land Plan Revision B [AS-005]. Shortly before the close of the Examination, the Crown Estate [AS-057] confirmed that the Commissioners had reached a separate agreement with the Applicant which provided sufficient assurance as to the way in which the CA powers could be exercised.
- 11.5.60. On this basis, the Commissioners confirmed their consent to the CA of the third party interests in the relevant plots for the purpose of s135(1) of the PA2008 subject to the inclusion of Article 37 of the dDCO, and to the Commissioners being consulted further if any variation to the dDCO is proposed that could affect any other provisions of the Order which are subject to s135(1) and s135(2) of the Act.

Public open space

- 11.5.61. The Applicant [REP3-013] confirmed, with the exception of the Saxon Shore Way, that the public rights of way on the site did not constitute open space. However, the land associated with the Saxon Shore Way was wider than the path itself and the Applicant had taken a broad and conservative approach in defining it as open space. The rights sought reflected those which the Environment Agency currently enjoyed; and the subsequent use of the land would be no less advantageous to the public.
- 11.5.62. We are content that the requirements of s132(3) of the Act are satisfied.

Human Rights Act (1998) considerations

- 11.5.63. Section 10 of the Statement of Reasons [APP-019] sets out the relevant Articles of the Convention namely Article 1 of the First Protocol, Article 6 and Article 8.
- 11.5.64. Article 1 of the First Protocol (the right to peaceful enjoyment of property) is engaged. Having considered all representations, we consider that the proposed interference with individuals' rights, with the exception of the CA powers sought for Plot No. 5/03 (part) relating to Work No. 8 within that plot, would be lawful, necessary, proportionate and justified in the public interest having regard to the public benefits of the Proposed Development.
- 11.5.65. Article 6 entitles APs to a fair and public hearing of their objections and is engaged. The provision of two CAHs and three OFHs, at which CA issues might also have been raised, has enabled any AP who wished to make representations to be heard fully, fairly and in public.
- 11.5.66. Article 8 protects private and family life, home and correspondence. Interference with this right can be justified if it is in accordance with law

and is necessary in the interests of, among other things, national security, public safety or the economic well-being of the country. No interference has been alleged.

- 11.5.67. In summary, we consider that there would be a very significant public benefit arising from the grant of consent and that benefit could only be realised if the Order land, with the exception of the proposed Lowland Grassland Meadow Habitat Management Area (part Plot No. 5/03 and part Work No. 8) is available and free from incumbrances which would be sanctioned by CA powers. Compensation provisions apply to affected interests and all parties have had the opportunity to make representations. It is significant that at the close of the Examination there were no outstanding objections to CA or TP.
- 11.5.68. Overall, subject to the qualification above, we are satisfied that any interference would be for a legitimate purpose, necessary and proportionate and the benefits of scheme outweigh any private loss.

11.6. CONCLUSIONS

- 11.6.1. The Applicant has undertaken an assessment of other potential sites on which to locate a similar project. We are satisfied, as far as CA and TP are concerned, that there is no alternative which would be capable of delivering similar benefits.
- 11.6.2. We have reviewed the proposed use of all land affected by the proposed CA powers. With the exception of part of Plot No. 5/03, insofar as it relates to Work No. 8 within it, the requirements for the CA of the land are fulfilled and justified.
- 11.6.3. We have also reviewed the temporary use of land for the carrying out, and for the maintenance of, the Proposed Development, and the related rights, which have been sought. We agree that the TP of any part of the Order land is necessary, as explained in paragraph 11.5.40, above.
- 11.6.4. The land sought for the Proposed Development and subject to CA, with the exception of part of Plot No. 5/03, is land that is required for the purposes of s122(2) (a) and (b) of the PA2008 and meets the tests set out in that section. It is land which is required for the development to which the development consent relates or is required to facilitate or is incidental to that development. We are also satisfied that the TP powers sought, over the Order land as a whole, are fully justified.
- 11.6.5. In considering the question of whether there is a compelling case in the public interest to acquire the land (s122(3) of the PA2008), we have taken into account the Applicant's case for CA and TP, as informed by its evidence on need and justification as set out in Chapter 5 of our Report.
- 11.6.6. The broad absence of concerns or objections from IPs or APs relevant to CA or TP has also been taken into account including the withdrawal of the two formal objections. We are satisfied that in respect of these, and for all remaining land about which there have been no formal objections and in respect of which specific individual matters have not been identified for

detailed examination and reporting, the public benefit in delivering the Proposed Development would outweigh the private loss.

11.6.7. For the purposes of s122(3) of the PA2008 we conclude that:

- the Applicant has demonstrated a compelling need for a renewable energy project and energy storage facility of the type that is the subject of this Application;
- the development for which the land is sought would be in accordance with national policy as set out NPS EN-1 and NPS EN-5;
- there is a need to secure the land and rights required, subject to the qualification above in relation to the CA of Plot No. 5/03 (part), to deliver the Proposed Development and to construct it within a reasonable timeframe;
- the Proposed Development would represent a public benefit to be weighed in the balance;
- the private loss to those affected would be mitigated through the selection of the land and the minimisation of the extent of the rights and interests proposed to be acquired;
- the Applicant has explored reasonable alternatives to the CA and TP of the rights and interests sought. However, for a project of this nature, it is reasonable that the Applicant should retain CA and TP powers in a made Order as a guarantee against the possible failure of voluntary agreements which, if left unresolved, could cause substantial timescale and delivery cost over-runs that would not be in the public interest;
- there are no alternatives which ought to be preferred; and
- secure funding, including a mechanism to ensure this, is available to enable the payment of any necessary compensation.

11.6.8. The case for CA and TP powers is required to be based on the case for the development overall. Chapter 13 reaches the conclusion that development consent should be granted. As set out above, the CA powers sought by the Applicant, with one exception, are justified and should be granted because there is a compelling case in the public interest for land and interests to be compulsorily acquired and therefore the proposal would comply with the PA2008 s122(3). We also find that s123 of the PA2008 has been satisfied.

11.6.9. In terms of TP, we recommend that the TP powers sought are necessary and should be granted. It is not appropriate to apply TP powers prospectively emerging from the NPA2017 in this case, as by the close of the Examination those powers had not yet commenced.

11.6.10. Affected Persons were consulted, and the project design developed on the basis of legislated TP procedure as it stood prior to the passage of NPA2017 and, at the time of the closure of this Examination, this was still in force. The Applicant proposes to exclude the operation of the TP provisions of NPA2017 in the dDCO (Article 6). This is an appropriate response to circumstances where the dDCO has been prepared and consulted upon before a commencement order for the TP provisions of NPA2017 has been made.

12. DRAFT DEVELOPMENT CONSENT ORDER (dDCO) AND RELATED MATTERS

12.1. INTRODUCTION

12.1.1. In this section we report on the Applicant's dDCO. We held two ISHs on the dDCO (ISH2 and ISH5) ([EV-007] and [EV-022]), and we issued two sets of Written Questions ([PD-004] and [PD-008]).

12.1.2. The dDCO (Revision A) as submitted [APP-016] was accompanied by an Explanatory Memorandum [APP-018]. The dDCO was revised on seven occasions during the course of the Examination: ([REP2-003]; [REP3-003]; [REP4-003]; [REP5-003]; [REP6-003]; [REP7-005] and [REP17-003]). The seventh revision ([REP17-003], Revision I) is the Applicant's final draft.

12.2. THE DCO AS APPLIED FOR

12.2.1. The DCO has a conventional structure. By way of familiarisation, interpretation and definitions are set out in Part 1, Article 2. Article 3 grants development consent. The 'authorised development' is described in Part 1 of Schedule 1 of the Order.

12.2.2. Powers of acquisition begin at Article 16 (Part 5). Article 29 (Part 6) contains provision for either the grant of a Deemed Marine Licence under the Marine and Coastal Access Act 2009 or a Marine Licence exemption.

12.2.3. There are miscellaneous and general provisions from Article 30 (Part 7) onwards. Article 35 relates to Arbitration; Article 37 sets out Crown Rights; Protective Provisions are at Article 38; and Article 39 provides funding security in relation to compulsory acquisition (CA) of land and rights and temporary possession (TP) of land.

12.2.4. In the Schedules, Part 1 of Schedule 1 lists the works comprising the authorised development; and Part 2 sets out Requirements. Schedule 7 contains Protective Provisions. The Deemed Marine Licence is at Schedule 8. The arbitration rules are to be found in Schedule 9.

12.3. CHANGES DURING EXAMINATION

12.3.1. The Applicant's final dDCO (Revision I) [REP17-003] incorporated a number of changes as a result of due diligence, our examination and from representations from, and discussions with, various Interested Parties (IPs). Some of the changes arose from other Issue Specific Hearings (ISHs) (e.g. ISH6: Environmental Matters [EV-023] with particular reference to safety management).

12.3.2. The changes can be followed sequentially through successive track change versions. Direct comparison can also be made between the original Application draft [APP-016] and the final draft dDCO ([REP17-004], tracked version). Inevitably, many of the changes are small

typographical issues, or clarifications which we do not need to describe. Others are of varying substance which we refer to below.

Part 1: Preliminary

Article 2: Interpretation

- 12.3.3. At Deadline 7, the Applicant amended the dDCO [REP7-005] to indicate that the *“environmental statement” means the document certified as the environmental statement by the Secretary of State for the purposes of this Order under Article 34 (certification of plans and documents etc.) as supplemented by the documents set out in Schedule 10’*. Schedule 10 was added to the dDCO under the heading ‘Environmental Statement Supplements’.

Part 2: Principal Powers; and Part 7: Miscellaneous and General

Article 5: Benefit of the Order; and Article 35: Arbitration

- 12.3.4. Article 5(1) of the dDCO provides for the transfer of the benefit of the Order with the written consent of the SoS. In turn, Article 5(5) requires the SoS to determine an application for consent within a period of eight weeks. Article 5(6) specifies that where the SoS is minded to refuse the application or fails to determine it within a prescribed period, the Applicant may refer the matter for determination in accordance with Article 35.
- 12.3.5. Article 35 makes provision for disputes to be settled by arbitration in accordance with the arbitration rules set out in Schedule 9. This specifies a timetable, time periods, procedure, the arbitrator’s powers, costs and confidentiality.
- 12.3.6. In terms of Article 5(1) we were told by the Applicant [REP3-015] that a transfer of benefit article had become common practice as offshore wind projects are legally required to transfer the transmission assets to an Offshore Transmission Owner and it had become quite common in more recent energy DCOs. At the same time, its drafting had become more comprehensive, providing greater clarity and certainty to the process.
- 12.3.7. As to Article 5(5) the Applicant indicated that it had sought to introduce a set of timescales with similar wording used in the draft Orders for Hornsea Three, Norfolk Vanguard, and Norfolk Boreas, albeit the ExA for Hornsea Three had raised questions about the timescales specified [REP3-015]. In the absence of any indication, by the close of our Examination, from the Department for Business, Energy and Industrial Strategy (BEIS) as to the acceptability or otherwise of this drafting, we were invited by the Applicant to recommend that the SoS determine the drafting of Article 5 as was seen fit having regard to any recently made DCOs.
- 12.3.8. In ExQ1 [PD-004] we asked the Applicant whether it believed that the process provided by Article 5(6) and Article 35 would be acceptable to the SoS. We pursued the matter further at CAH2 when we questioned

whether it was appropriate for the SoS's decision making powers to be subject to arbitration as opposed to judicial process.

12.3.9. The Applicant explained that the transfer provision merely sought to establish that the transferee had genuine standing. The decision required professional judgement and it was appropriate for this to be subject to dispute resolution. The SoS would have the right to jointly appoint the arbitrator and to submit evidence. We were told that the Applicant was not seeking to fetter the powers of the SoS but, instead, to ensure that the dDCO included an evidence based and transparent process for the transfer of benefit ([REP3-015] paragraphs 3.18 -3.19).

12.3.10. Despite this explanation, we remain uncomfortable about the applicability of arbitration to the SoS's decision-making powers under Article 35(2):

2) Where the referral to arbitration under paragraph (1) relates to a difference with the Secretary of State, in the event that the parties cannot agree upon a single arbitrator either party may refer to the Centre for Effective Dispute Resolution for the appointment of an arbitrator.'

12.3.11. Whilst court proceedings may well compare unfavourably, notably in terms of timescale and cost, we are not convinced, especially in the absence of directly comparable DCOs, that we should endorse the inclusion of Article 5(6) as proposed by the Applicant. In this regard we recommend amending Article 5 by removing Article 5(6) and renumbering subsequent paragraphs; consequential amendments where reference is made to the renumbered paragraphs; and amending Article 35 by deleting Article 35(2) and renumbering the subsequent paragraph.

Part 5: Powers of Acquisition

Article 18: Compulsory acquisition of rights (Schedule 5)

12.3.12. The only matter of substance related to Schedule 5 'Land in which new rights etc may be acquired'. In this regard, following the Applicant's decision³⁰ not to pursue the proposed alternative access route to the north of the existing Cleve Hill substation, Work No. 6, within Plot No. 3/06, was deleted from the Works Plan revision C [REP7-003] and from Schedule 5 of the final dDCO [REP17-003].

Part 7: Miscellaneous and General

Article 29: Deemed Marine Licence under the Marine and Coastal Access Act 2009 (Schedule 8)

12.3.13. Article 29 [REP17-003] reflects the agreement reached between the Applicant and the Marine Management Organisation by reference to a Deemed Marine Licence under the 2009 Act and the deletion of the alternative marine licensing exemption [REP7-008]³¹. Schedule 8, Part 2,

³⁰ See paragraph 2.2.4 above

³¹ See paragraphs 2.2.2 and 8.6.33 – 8.6.35 above

condition 5, incorporates the contact details for the Marine Management Organisation's Marine Pollution Response Team [REP17-015]; and condition 7 precludes licenced activities unless a maintenance plan has been approved by the Marine Management Organisation and the works are undertaken in accordance with the agreed plan.

Article 36: Requirements, appeals etc. (Part 3 of Schedule 1)

12.3.14. This article relates to 'Requirements and appeals etc.' At ISH2, the Applicant [REP3-015] explained that the article provided an appeals mechanism where there had been a failure to determine an application to discharge a Requirement. The article as originally drafted was complex in construction and difficult to comprehend. Following discussions and agreement between the Applicant and Swale Borough Council, the article was recast to make the appeal provisions for the discharge of requirements clearer [REP6-019]:

- 1) *'Where an application is made to, or a request is made to the relevant planning authority or any other relevant person for any agreement or approval required or contemplated by any of the provisions of the Order, such agreement or approval must, if given, be given in writing and must not be unreasonably withheld or delayed.'*
- 2) *Part 3 (procedure for discharge of requirements) of Schedule 1 has effect in relation to all agreements or approvals granted, refused or withheld in relation to requirements'.*

12.3.15. The redrafting of Part 3 of Schedule 1, 'Procedure for discharge of requirements', similarly agreed by the Applicant and the Council, resulted in less intricate step-by-step appeals procedure [REP6-003] and [REP6-004]. In short it provided for and described:

- a timetable for the discharging authority to give notice of its decision;
- a protocol for the discharging authority to request further information and related consultee arrangements;
- the rights of appeal; the appeals process; and a timetable for the submission of documents;
- arrangements for the appointment by the SoS of an appointed person and a protocol relating to the appointed person's consideration of the appeal;
- confirmation that the decision of the appointed person is final and binding unless proceedings are brought by a claim for judicial review; and
- arrangements for costs.

12.3.16. We are satisfied that the wording explicitly disengages Article 35 (arbitration) by reference to the procedure set out in Part 3 of Schedule 1. Overall, we believe that the agreement reached between the Applicant and the Council provides a comprehensive and coherent procedure for discharging Requirements which we endorse.

Article 39: Funding

- 12.3.17. Article 39 relates to the funding provisions for the compulsory acquisition (CA) of land and rights, the temporary use (TP) of land and Protective Provisions for statutory undertakers within the Order. It precludes the Applicant or the operator of the Proposed Development ('the undertaker') from exercising CA or TP powers unless it has first put in place a guarantee of security as may be approved by the SoS.
- 12.3.18. At ISH2 the Applicant [REP3-015], in response to our question, confirmed that in the event that the SoS refused to approve the guarantee, the decision would be subject to the Arbitration provisions of Article 35. Although Article 39 does not contain an express provision for arbitration, Article 35 would be engaged in that it states:
- 1) 'Any difference under any provision of this Order, unless otherwise provided for, is to be referred and settled in arbitration
 - 2) *Where the referral to arbitration under paragraph (1) relates to a difference with the Secretary of State, in the event that the parties cannot agree upon a single arbitrator within the specified time period stipulated in paragraph (1), either party may refer to the Centre for Effective Dispute Resolution for appointment of an arbitrator'.*
- 12.3.19. As set out above, in relation to Articles 5 and 35, we doubt the applicability of the arbitration provision in relation to decisions to be made by the SoS. If the SoS agrees with our earlier recommendation to delete Article 35(2), no further consideration of this article would be required in that Article 39 does not contain an express arbitration clause.

Schedule 1, Part 2 Requirements

Requirement 2: Detailed design approval

- 12.3.20. In Chapter 4 of our Report, at paragraphs 4.8.15 to 4.8.25, we set out in some detail the concerns we identified about the Candidate Design adopted for the Environmental Impact Assessment (EIA) and the Outline Design Principles which would form the basis for the detailed design approval and the discharge of Requirement 2. We came to the conclusion (at paragraphs 4.8.23 – 4.8.25) that any further refinement of the Outline Design Principles was unlikely to change the assessment of significant effects presented in the Environmental Statement (ES) (i.e. based on the Candidate Design).
- 12.3.21. Nonetheless, we recognised a remote possibility that the Proposed Development could be built to parameters beyond what had been assessed in the ES. Should the SoS take the same view and come to the conclusion that a more restrictive approach is required, the views of the relevant parties will need to be obtained. We suggest that strict adherence to the assessed parameters could be achieved by amending Requirement 2(2) as follows:

- (2) *The details submitted must be in accordance with -*
- (a) *the location, order limits and grid coordinates plan;*
 - (b) *the works plan;*
 - (c) *the principles and assessments set out in the environmental statement; and*
 - (d) *the outline design principles, or such variation thereof as may be approved by the relevant planning authority pursuant to Requirement 19.*

Requirement 3: Battery safety management

- 12.3.22. Throughout the Examination, notably in OFH2 and ISHs 2, 5 and 6, we heard representations from IPs about the need for measures to be put in place to ensure adequate safety provisions for the battery energy storage system³². The original version of the dDCO made no such commitment.
- 12.3.23. The Applicant's initial response to representations made by The Faversham Society, at OFH2 [REP3-015], was to extend draft Requirement 2, Detailed design approval, to incorporate '(j) *safety management*' [REP3-003]. This was supplemented, at Deadline 4, with an outline Battery Fire Safety Management Plan (BFSMP) [REP4-045] which set out the design approach to be taken and the information that would be required to fulfil that requirement.
- 12.3.24. Further discussion, and contributions from The Faversham Society, followed at ISH5 [REP5-010]. We were also advised by the Applicant [REP5-011] that a revised outline BFSMP was in preparation and we suggested that this should be embodied in a separate Requirement. The subsequent, renamed, outline Battery Safety Management Plan (BSMP) [REP5-029] included recommendations from the Health and Safety Executive (HSE) following peer review and incorporated comments from Kent Fire and Rescue Service and guidance on the transportation of lithium-ion batteries.
- 12.3.25. The dDCO [REP5-003] was also updated by the insertion of a new Requirement 3 (replacing 2(j)). Save for one minor typographical correction, this has been carried forward into the Applicant's final version of the dDCO [REP17-003]:

Battery safety management

3. — (1) Work No. 2(a) must not commence until a Battery Safety Management Plan ("BSMP") has been submitted to and approved by the relevant planning authority.

(2) The BSMP must prescribe for measures to facilitate safety during the construction, operation and decommissioning of Work No. 2(a) including

³² See Chapter 8 (section 8.7) above

the transportation of new, used and replacement battery cells both to and from the authorised development.

(3) The BSMP must accord with the outline battery safety management plan.

(4) The relevant planning authority must consult with the Health and Safety Executive and Kent Fire and Rescue Service before determining an application for approval of the BSMP.

(5) The BSMP must be implemented as approved.

12.3.26. During ISH2 and ISH5 (dDCO), OFH3 and ISH6 (Environmental Matters) The Faversham Society [REP2-108] and [REP5-054] called for greater certainty in the dDCO to ensure that Swale Borough Council was provided with a clear schedule of Requirements in order to give the local planning authority a realistic prospect of exercising its responsibility for their discharge.

12.3.27. In particular, The Faversham Society considered that:

'the dDCO should require the Applicant to secure clearance from appropriate regulatory, scientific and professional bodies that the proposed solar and battery installations are non-hazardous and safe. The developer should be required to secure a statement from the following bodies that they are certain that the technology is safe, will be operated maintained to a safe standard and that any incident can be dealt without endangering human life or damaging the environment, before submitting their application to Swale Borough Council:

- *The HSE: assurance that the proposal meets all health and safety standards and any anticipated changes in the next five years. Assurance that the proposed safety supervision and maintenance is adequate;*
- *Public Health England: assurance that the development poses no threat to human life;*
- *Environment Agency: assurance that they are satisfied that the pollution risks have been adequately addressed so that the risk is very low;*
- *Kent Fire and Rescue Service: assurance that they are equipped and trained to deal with any foreseeable incident. Assurance that the proposed fire safety supervision and maintenance is adequate;*
- *Kent Police Service: assurance that the site is secure, and that any terrorism threat is very low; and*
- *Insurance: evidence that the development is fully insured for all risks in the construction and operational phases.'*

12.3.28. The Faversham Society re-iterated its concerns in its Deadline 7 submission [REP7-090], about a number of the draft Requirements being unclear and difficult for the Council to enforce.

12.3.29. In our opinion, the level of detail sought by The Faversham Society goes far beyond what is necessary to be secured by the Recommended DCO. In this regard, the outline BSMP provides a firm foundation of measures

following consultation with the HSE and Kent Fire and Rescue Service. It also includes good practice from the Insurance Industry and specific guidance and legislation relating to the transportation of lithium-ion batteries.

- 12.3.30. The outline BSMP would be reviewed and updated as necessary and would be subject to consultation with relevant bodies prior to submission to Swale Borough Council for approval. The Council would, in turn, be required to consult specified bodies, and it has a discretion to consult additional parties. We are satisfied that Requirement 3 provides the necessary mechanism to secure the submission, approval and implementation of a robust battery safety management plan.

Requirement 11: Construction Environmental Management Plan

- 12.3.31. The original dDCO [APP-016] made provision (Requirement 10) for the submission, approval and implementation of a Construction Environmental Management Plan (CEMP) in accordance with the outline plan submitted as part of the Application [APP-205]. The areas to be covered included working hours, lighting, noise, ecology and ornithology, hydrology and water quality, air quality and waste.
- 12.3.32. The dDCO updated at Deadline 2 [REP2-003] included a revised Requirement 10 to ensure that the CEMP included a site waste management plan, breeding bird protection plan, new watercourse crossing inventory and upgraded watercourse crossing inventory.
- 12.3.33. In ExQ1 [PD-004] we asked the Applicant to explain how documents including the Outline Design Principles and the outline CEMP could be properly secured in any DCO; and whether the Applicant believed that the dDCO should be amended to include reference to the specific documents and plans that were relied on for mitigation assumed in the assessment in the Environmental Statement (ES).
- 12.3.34. We were informed that the Outline Design Principles would be a certified document under Article 34 of the dDCO and would have to be followed in accordance with Requirement 2. The outline CEMP would also be a certified document which would provide the basis for the final, detailed CEMP required under Requirement 10.
- 12.3.35. We were also assured by the Applicant that it was satisfied that all necessary plans relied upon for mitigation in the ES had been secured in the dDCO. However, discussions were ongoing about outline documents and whether it would be necessary to combine, separate or augment documentation.
- 12.3.36. At ISH2 (dDCO) we queried how the measures in the outline CEMP and the Outline Design Principles would be secured through the dDCO and whether the dDCO should be amended to include reference to the specific plans and documents relied upon. We were told [REP3-015] that the pollution prevention plan was an integral part of the outline CEMP, specific reference by Requirement was not necessary, and the outline

CEMP had been updated to incorporate the pollution prevention measures [REP3-006].

- 12.3.37. Draft Requirement 10 became draft Requirement 11 in the dDCO submitted at Deadline 5 [REP5-003]. Further improvements and clarity followed [REP6-013] and [REP7-025], which are explained more fully in Chapter 4 (paragraphs 4.8.30 – 4.8.33)³³. On this basis, we are satisfied that there is sufficient direction and clarity for the authority that would ultimately be responsible for the discharge of Requirements.

Requirement 14: Protected species

- 12.3.38. In ExQ1 [PD-004], we asked whether this Requirement (originally numbered 13) was necessary in light of the statutory protection and licensing of European Protected Species. The Applicant [REP2-006] confirmed that the Requirement was not intended to replace the licensing regime. Its purpose was to ensure that an application for a licence was made at the appropriate stage of the authorised development. We also asked, at ISH5, whether the Requirement should include species protected under domestic legislation. The Applicant [REP5-010] did not have a strong view either way and indicated that, whilst the Requirement might involve duplication, it had been requested by Natural England ([REP5-015] – response to ExQ2.4.17) and had been included in previously made DCOs.
- 12.3.39. We are content that the Requirement as amended [REP5-003] is legitimate in that it requires pre-construction survey work, prior to the commencement of any phase, to determine whether any legally protected species are present. It does not overlap other legislation which would provide the protection of any relevant species.

Requirement 16: Local skills, supply chain and employment

- 12.3.40. The dDCO submitted at Deadline 2 [REP2-003] introduced a new Requirement (15) requiring the submission and approval, prior to the commencement of any phase of the Proposed Development, of a local skills, supply chain and employment plan³⁴. This reflects identified construction phase mitigation identified by the Applicant, as set out in Chapter 13 of the ES [APP-043]:

'The Applicant will seek to raise awareness within the local community of, supply chain and employment opportunities, in order to promote local socioeconomic benefits.'

- 12.3.41. The Applicant also submitted an outline Skills, Supply Chain and Employment Plan at Deadline 4 [REP4-047] which was up-dated, to include timescales for the implementation of activities, at Deadline 5

³³ See also paragraphs 7.5.26, 8.3.14, 8.6.16, 8.6.17, 8.6.47, 8.6.51 – 8.6.54 and 9.8.149 – 9.8.151 above

³⁴ See paragraphs 8.5.22, 8.5.55 and 8.5.56 above

[REP5-026]. The plan sets out how the Applicant will work with local stakeholders by focusing on:

- the opportunities for the involvement of local companies in the construction and operation supply chain;
- the ability of local residents to access employment opportunities associated with the construction and operation of the park; and
- the ability of research organisations to use the site to enable research and innovation in the renewable energy sector.

12.3.42. This would be secured through Requirement 16 in the Recommended DCO. It was not controversial, and it would be consistent with core objective 7 of Bearing Fruits 2031: The Swale Borough Local Plan, which seeks to bring economic growth to the District. This is against a background of identified weaknesses within the Borough, set out in section 2.2 of the Local Plan, including: poor performance in education and skills; a net exporter of labour, with relatively high unemployment levels; a narrow economy with above average proportion of lower-paid jobs; and concentrations of deprivation on Sheppey and in Sittingbourne, particularly in areas of, amongst others, employment and skills. The National Policy Statement for Energy (NPS-1) also indicates that consideration should be given to any relevant positive provisions to mitigate impacts and any legacy benefits that may arise.

Requirement 17: Decommissioning

12.3.43. The original dDCO [APP-016] contained a simple decommissioning Requirement (15) entailing the submission and approval of a decommissioning and restoration plan, within three months of the cessation of commercial operation, and implementation in accordance with the approved plan. It did not include the Environment Agency as a consultee, and there was no indication of a time limit to be placed on the Proposed Development [RR-507]. In this regard the Environment Agency, supported by Natural England [RR-826], had requested a 40-year time limit, so that its plans for managed realignment at the site could be implemented.

12.3.44. The subsequent SoCG with the Environment Agency [AS-017] confirmed the Applicant's acceptance of a suitably worded Requirement, limiting the operational life of the project to 40 years subject to the Environment Agency (or equivalent body at the time) demonstrating that the managed realignment proposals remained capable of implementation on the Proposed Development Site at that time.

12.3.45. The Applicant submitted a revised dDCO [REP2-003]. Subsequent discussion with the Environment Agency [AS-030] confirmed:

- the sole justification for time-limiting the Proposed Development was the timescale for realignment in the Environment Agency's draft Medway Estuary and Swale Strategy (MEASS);
- in the event of managed realignment not being required, the Environment Agency would not wish to curtail the continued operation of the authorised development;

- the Environment Agency would not require decommissioning of any part of the development on land not needed for managed realignment; and
- the Environment Agency's preference for a review mechanism at year 35, repeated as necessary at five-yearly intervals if the Environment Agency was not in a position to proceed with its MEASS.

- 12.3.46. This was captured in a rephrasing of the draft Requirement [AS-030]; which formed the basis of our detailed discussion at ISH2 (dDCO) [REP3-015]. It became apparent that Swale Borough Council had not been party to the drafting of the Requirement, and that there were areas of detail that needed to be explored. Given general consensus on the principle of the Requirement, the Applicant and the Council were invited to meet outside the Hearing to review terminology and process. This was translated into a further drafting of the Requirement [REP3-003].
- 12.3.47. Discussion with the Environment Agency and Swale Borough Council continued, and we invited confirmation from the Environment Agency whether or not the proposed arrangements would provide sufficient flexibility, yet certainty, and adequately safeguard and facilitate managed realignment [PD-008]. The Environment Agency [REP4-061] responded in the affirmative, as did Swale Borough Council [REP4-055]. A three-party position paper [AS-039], setting out agreement on the content and format of the draft Requirement, followed. Some minor technical redrafting arose [REP5-003], [REP6-003] and [REP7-005].
- 12.3.48. Overall, we are content that the draft decommissioning Requirement provides the Applicant with a defined minimum period of operation. It also fully safeguards the Environment Agency's plans for managed realignment, establishes a review process after 35 years, and specifies the obligations imposed on the Applicant and Environment Agency and the role of Swale Borough Council. In addition, it provides recourse to arbitration in the event of dispute.
- 12.3.49. On a further matter, in ExQ1 [PD-004] we asked the Applicant to explain the financial arrangements that would be put in place to secure decommissioning of the Proposed Development at the end of its operational life. This was discussed further at ISH2 and ISH5 and raised by IPs.
- 12.3.50. We were informed [REP2-006], [REP3-015] and [REP5-010] that, although the Applicant intended to follow good commercial practice to set aside funds during the operational life of the project, it was not necessary to provide a financial bond as guarantee as the enforcement mechanisms in the PA2008 were rigorous, criminal liability would be a possible consequence of a breach of the Requirement, and The Proceeds of Crime Act 2002 added further deterrent to a breach. Moreover, it was not routine practice for DCOs to incorporate decommissioning bonds. Without clear precedent or Government guidance, we see no basis to justify a financial bond secured by requirement in the DCO. Moreover, we do not believe that such a requirement would meet the relevant law and policy on the drafting of requirements.

Requirement 20: Consultation

- 12.3.51. At ISH2 (dDCO), in relation to the subsequent discharge of Requirements and the need for Swale Borough Council to consult other parties, the Applicant [REP3-015] confirmed that it would be good practice for it to reach an understanding with the relevant consultee before making any application for discharge. A new Requirement (19) was inserted into the dDCO at Deadline 4 [REP4-003]. This subsequently became Requirement 20 [REP5-003]. We support this as necessary measure in terms of overall efficiency to the mutual benefit of all parties.

Other Matters

- 12.3.52. Swale Borough Council's substantive response to the Application [REP2-054] included concerns about the obligations being placed on the Council by the dDCO and the lack of clarity in the Requirements. The Faversham Society ([REP5-054] and [REP7-090]) and CPRE Kent echoed these and called for further details and reassurance that the Requirements and mitigation measures would be realistic, effective and enforceable. The affordability of enforcement and the potential cost to local rate payers was also questioned.
- 12.3.53. We are satisfied that Swale Borough Council's concerns about consultation arrangements involving the discharge of Requirements have been met by the addition of Requirement 20.
- 12.3.54. Reservations were voiced, in particular by Swale Borough Council [REP4-055], about certain controls being 'buried' in management plan documents. The Council considered this to be inappropriate as it hindered ready access, particularly by members of the public. On this basis, the Council called for specific Requirements covering permitted hours of construction, hours of piling, no waste burning and the position regarding lighting on the site. In support, it cited the planning conditions attached to the planning permission for the London Array substation.
- 12.3.55. We are aware that practice varies between those involved in framing Requirements in made DCOs and the same is true of the construction of conditions in planning permissions. Some favour a numerically long list whereas others group a series of related controls within a composite topic area, for example, a Construction Environmental Management Plan (CEMP). There is no right or wrong approach.
- 12.3.56. Looking at the dDCO, the need to agree lighting is covered in Requirement 2(g), and a site waste management plan is provided for as part of the CEMP in Requirement 11(a). We see no reason for duplication or to remove these to separate Requirements.
- 12.3.57. We acknowledge that the hours during which construction and piling activities are proposed are not readily accessible, and some prior knowledge of the documentation is required as the proposed working hours are described in the outline CEMP. Nonetheless, the overall ability to restrict working hours would remain and we see no fundamental weakness in the Applicant's approach.

- 12.3.58. The Faversham Society [REP7-090] argued for even greater detail in framing the Requirements. In particular, it questioned the 'very broad' permission granted in Requirement 2(2)(c) and the likely difficulties to be faced by Swale Borough Council. It also sought to specify a number of agencies which should be included as 'discharging authorities', and it made a plea for the DCO to be robust in that battery energy storage was not a tried and tested technology.
- 12.3.59. Taking these in turn, the relevant part of Requirement 2, the detailed design approval requirement, does nothing more than stipulate that '*the details to be submitted must accord with the outline design principles, or such variation thereof as may be approved by the relevant planning authority pursuant to requirement 19.*'
- 12.3.60. In this regard, the Outline Design Principles establish the parameters of the Proposed Development, subject to any approved minor amendments which are '*..... immaterial changes where it has been demonstrated that the subject matter of the agreement sought is unlikely to give rise to any materially different environmental effects from those assessed in the environmental statement.*'
- 12.3.61. The scope for change is thus a very limited one. In our view, any DCO granted should provide this degree of flexibility to accommodate minor design changes (for example to reflect operational requirements or advances in technology) within the parameters tested in the EIA.
- 12.3.62. In terms of consultation, Swale Borough Council has a duty to consult statutory consultees and a discretionary power to consult other agencies as it sees fit. We believe it unnecessary, and potentially confusing, to specify an *ad hoc* list of agencies. In any event, the duty of discharging Requirements rests solely with the relevant planning authority, or the SoS in the event of an appeal.
- 12.3.63. Finally, as discussed above, we endorse the outline battery safety management plan as a robust means of ensuring that final details are approved by Swale Borough Council following input from any relevant consultees.

BEIS Consultation on Energy Storage

- 12.3.64. The Applicant [AS-042] drew our attention to the publication, on 15 October 2019, of the '*Proposals regarding the planning system for electricity storage follow up consultation, and government response to original consultation*'. This proposes to exclude electricity storage, except pumped hydro, from the NSIP regime in England and Wales.
- 12.3.65. The Applicant indicated that if the new legislation proposed by the Consultation was made before the Application is determined, such that electricity storage was carved out of the NSIP regime, then the electricity storage comprised in the Proposed Development may constitute Associated Development, and Schedule 1 of the DCO should the SoS consider making the Order. The Recommended DCO is based on the legislation operative at the date of this Report.

Compulsory Acquisition

- 12.3.66. Part 5 of the dDCO contains Articles 16 to 27. These relate to powers of acquisition, including CA of land and rights, and the TP of land for carrying out the Proposed Development and for its maintenance. None of these Articles was disputed and the only amendments made during the Examination are of a minor drafting nature.

The Justification of the DCO Provisions

- 12.3.67. The Explanatory Memorandum was updated by the Applicant at Deadline 7 [REP7-008] and again, as a result of a typographical omission, following our R17 request [REP17-006]. We have reviewed the document and confirm that we are generally content with it. There are a few comments we make to assist the SoS.
- 12.3.68. The Explanatory Memorandum provides summary details of the Applicant, the Authorised Development (including works that comprise Associated Development), phasing, parameters in the Order, the structure of the document, and the purpose of the Order.
- 12.3.69. The provisions of the Order are set out with a brief description of each Article and reference to any relevant legal powers. In particular we, draw attention to Articles 5 and 35 and the provision for arbitration which has been developed by the Applicant and its advisors on the basis of experience on other projects. Our reservations on the arbitration provision, as might be applicable to the SoS, are explained above.
- 12.3.70. In addition, Article 6 dis-applies provisions of the Neighbourhood Planning Act 2017, relating to temporary possession. The Regulations required to provide more detail on the operation of the regime have not yet been made and the provisions have not yet come into force.
- 12.3.71. The remaining Articles generally follow model provisions with exceptions clearly stated with references to supporting DCOs which have a similar approach. We do not demur from these explanations and the corresponding justifications.
- 12.3.72. In terms of the Schedules, model provisions are again adopted save for a few differences which we explain. In this regard, references to the former Infrastructure Planning Commission have been replaced by reference to the relevant planning authority and, where there is a clearly identifiable third party whose views need to be obtained before any approval is given, the relevant consultee is named.
- 12.3.73. Schedule 6 incorporates changes to the Land Compensation Act 1973 and the Compulsory Purchase Act 1965 arising from the Housing and Planning Act 2016.

12.4. THE ExA's AMENDMENTS TO THE DCO

- 12.4.1. The Examination of the DCO proceeded in a collaborative manner with the Applicant seeking to address matters which we raised and those

arising from the participation of various other parties including, but not limited to, Swale Borough Council, the Environment Agency, the Marine Management Organisation, GREAT, The Faversham Society and CPRE Kent.

- 12.4.2. The change process between the Application dDCO (Revision A) [APP-016] up to the Applicant's preferred dDCO (Revision I) [REP17-005] was fully documented by the Applicant in successive versions helpfully aided by tracked change versions and also the Applicant's summaries of ISH2 [REP3-015] and ISH5 [REP5-010]. We have discussed this process, with particular references to proposed changes of substance, in section 12.3 above.
- 12.4.3. A substantial number of minor revisions were also proposed by the Applicant to address comprehension, clarity or interpretation, typographical errors and to reflect good practice in drafting. They were not objected to by any IP and we have not itemised them as they can be followed through the successive iterations of the dDCO.
- 12.4.4. Only two areas of contention remained between the Applicant and the ExA in relation to the dDCO at the close of the Examination. These relate to Article 5(6) and Article 35(2), which we discuss above and record in Table 1 below. The Applicant specifically requested that its preferred drafting should be put before the SoS to enable comparative consideration with any DCOs made after the close of the Examination with similar provisions. However, for the reasons already given we disagree with the Applicant's approach and recommend changes to Articles 5 and 35 as set out in Table 1 below.
- 12.4.5. Subject to this qualification, we are satisfied that the aggregate of changes made up to dDCO (Revision I) appropriately addresses all of the issues that arose in the Examination.
- 12.4.6. Our suggested amendments to Article 5 and Article 35 are summarised in Table 1 below and incorporated in the Recommended DCO at Appendix C(i). We are satisfied that all of the provisions in the Recommended DCO are within legal powers.
- 12.4.7. In addition, as referred to in paragraphs 11.5.33 – 11.5.43 and 11.6.2 – 11.6.4 above, we set out our view that the SoS should not grant CA for the permanent acquisition of Plot No. 5/03 as a whole insofar as the area identified as Work No. 8 (habitat management area) should be excluded. However, we recognised that TP powers would nonetheless be required for rights of access for the purposes of carrying out and maintaining the Proposed Development. Should the SoS determine to make the DCO, and agree with our Recommendation on CA and TP, the grant of new acquisition rights should be reflected in Schedule 5 of the made DCO.
- 12.4.8. The SoS should also note that although the Recommended DCO has been validated, it contains two twin-format tables (i.e. column 1: Point IDs 1 – 99 and column 2: Point IDs 100- 198) setting out grid coordinates. Whilst this arrangement is unambiguous, if it is decided that the grid

coordinates should be numbered sequentially, in a single column, consideration will need to be given to amending these tables in any Order granted.

Table 1: DCO Provisions Recommended to be Changed

| Provision | Examination Issue | Recommendations |
|------------------|--------------------------|---|
| Article 5 | Arbitration and the SoS | Amend Article 5 by: deleting Article 5(6); renumbering the remainder of the Articles; and consequential amendments where reference is made to renumbered paragraphs within Article 5. |
| Article 35 | Arbitration and the SoS | Amend Article 35 by deleting Article 35(2) and renumbering the remainder of the Article. |

12.5. CONCLUSIONS

- 12.5.1. We confirm that all matters raised, and representations made, have been taken into account. Where representations have been made seeking alterations which we have not specifically mentioned or given effect to, we have decided that the Applicant’s responses or other evidence deals with the matter sufficiently, or the matter is not important and relevant or that insufficient weight should be given to it.
- 12.5.2. The Compulsory Acquisition and Temporary Possession Powers contained in Articles 16 to 27, with the exception of the CA powers sought for part of Plot No. 5/03 (Work No. 8 within it), are appropriate and necessary. We recommend a limited number of changes to the DCO listed in the table above and they are included in our Recommended DCO.

13. SUMMARY OF FINDINGS AND CONCLUSIONS

13.1. INTRODUCTION

13.1.1. This chapter summarises our conclusions arising from the Report as a whole and sets out our recommendation to the Secretary of State (SoS).

13.2. CONSIDERATION OF FINDINGS AND CONCLUSIONS

- 13.2.1. We consider that there is no applicable National Policy Statement (NPS) in place for either the proposed solar photovoltaic array or for the proposed energy storage facility that accords with section (s)104 of the Planning Act 2008 (PA2008). The Application therefore falls to be determined under s105 of the PA2008. Section 105, subsection 2(c) requires the SoS to have regard to *'any other matters which the Secretary of State thinks are both important and relevant to the Secretary of State's decision'*.
- 13.2.2. We conclude that NPS EN-1 (Overarching National Policy Statement for Energy) and NPS EN-5 (National Policy Statement for Electricity Networks Infrastructure) are both important and relevant.
- 13.2.3. The National Planning Policy Framework also has relevance in setting out the Government's approach to achieving sustainable development.
- 13.2.4. We have also had full regard to the Marine and Coastal Act 2009 and the Marine Policy Statement. The terms of the Deemed Marine Licence, endorsed by the Marine Management Organisation (MMO), are set out in Article 29 and Schedule 8 of the Recommended DCO.
- 13.2.5. We have also had regard to the Natural Environment and Rural Communities Act 2006 (as amended) (the NERC Act) and the biodiversity duty in our conclusions and in reaching our recommendation.
- 13.2.6. As required by Regulation 3 of the Infrastructure Planning (Decisions) Regulations 2010, we have had regard to the desirability of preserving designated heritage assets or their settings or any features of special architectural or historic interest which they possess.
- 13.2.7. We have identified a number of relevant and important development plan policies which have been taken into account. We have also had regard to matters arising in the Local Impact Reports from Swale Borough Council, Canterbury City Council and Kent County Council.
- 13.2.8. We find that the Proposed Development is consistent with, and supportive of, Government policy, including the UK Solar PV Strategy. Policy identifies a need for low-carbon and renewable energy NSIPs in order to address climate change, to meet the legal commitment to Net Zero, and to ensure a secure, diverse and affordable energy supply. As such, we attribute substantial weight to the benefits of the proposed solar PV array, and we find the proposed co-located energy storage

system to be a factor of significant additional weight in favour of the project.

- 13.2.9. We acknowledge that the Proposed Development would have adverse landscape, visual, recreational and cultural heritage impacts which weigh against the Proposed Development both individually and in combination. We also attribute limited weight to the temporary transport and traffic impacts on the local population. We consider that, with appropriate mitigation secured through the recommended DCO, the consideration of biodiversity and nature conservation is neutral in the overall balance. We find that a number of other matters that were considered in the Examination do not weigh against the Order. We are also content that the information and analysis provided satisfies the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 in respect of major accidents and disasters.
- 13.2.10. Overall, we conclude that the significant benefits to be gained from the Proposed Development, irrespective of whether or not it includes the energy storage facility, strongly outweigh those matters which tell against the proposal.
- 13.2.11. Having considered all other matters and representations received, we are satisfied that there are no important and relevant matters that would individually or collectively outweigh the benefits we have identified and lead to a different recommendation from that below.
- 13.2.12. With the mitigation proposed through the Recommended DCO, there are no adverse impacts alone or cumulatively, or in-combination with other projects and plans, arising from the Proposed Development that would outweigh its benefits.
- 13.2.13. Whilst the SoS is the competent authority under the Habitats Regulations and will make the definitive assessment, we find that the Proposed Development would have no adverse effect on integrity, either alone or in-combination with other projects or plans, on the qualifying features of any European site and this finding has been taken into account in reaching our recommendation.
- 13.2.14. We have considered the case for Compulsory Acquisition (CA) and Temporary Possession (TP) of land and rights required in order to implement and maintain the Proposed Development. At the close of the Examination there were no outstanding objections. The CA and TP powers requested, with one exception in relation to CA, are necessary to enable the Applicant to complete the Proposed Development. In addition, there is a compelling case in the public interest, the Applicant has a clear idea of how it intends to use the land, and funds are available to meet the compensation liabilities that might flow from the exercise of CA powers.
- 13.2.15. We have had regard to the provisions of the Human Rights Act 1998, and, in some cases, there would be interference with the peaceful enjoyment of possessions in contravention of Article 1 of the First

Protocol. Nonetheless, with the weight of national policy in favour of the Proposed Development, the wider public interest qualifies any interference with the human rights of the owners and occupiers affected by CA and TP of lands. The interference in their human rights would be proportionate and justified in the public interest.

- 13.2.16. We have also had regard to the Public Sector Equality Duty (PSED) contained in s149 of the Equality Act 2010. We find, with the mitigation measures to be secured through the Recommended DCO, the Proposed Development would not harm the interests of persons who share a protected characteristic or have any adverse effect on the relationships between such persons and persons who do not share a protected characteristic. On that basis, there would be no breach of the PSED.

13.3. RECOMMENDATION

- 13.3.1. For all of the above reasons and in light of our findings and conclusions on all important and relevant matters set out in our Report we recommend, in accordance with the Planning Act 2008 (as amended) that the Secretary of State should make the Order in the form attached at Appendix C(i) to this Report.

APPENDICES

APPENDIX A: EXAMINATION LIBRARY

APPENDIX B: LIST OF ABBREVIATIONS

APPENDIX C(i): THE RECOMMENDED DCO

APPENDIX C(ii): INDICATIVE DRAFT AMENDMENT TO REQUIREMENT 2 OF THE DCO

APPENDIX A: EXAMINATION LIBRARY

Cleve Hill Solar Park Examination Library

Updated – 28 February 2020

This Examination Library relates to the Cleve Hill Solar Park application. The library lists each document that has been submitted to the examination by any party and documents that have been issued by the Planning Inspectorate. All documents listed have been published to the National Infrastructure's Planning website and a hyperlink is provided for each document. A unique reference is given to each document; these references will be used within the Report on the Implications for European Sites and will be used in the Examining Authority's Recommendation Report. The documents within the library are categorised either by document type or by the deadline to which they are submitted.

Please note the following:

- This is a working document and will be updated periodically as the examination progresses.
- Advice under Section 51 of the Planning Act 2008 that has been issued by the Inspectorate, is published to the National Infrastructure Website but is not included within the Examination Library as such advice is not an examination document.
- This document contains references to documents from the point the application was submitted.
- The order of documents within each sub-section is either chronological, numerical, or alphabetical and confers no priority or higher status on those that have been listed first.

EN010085 – Cleve Hill Solar Park**Examination Library - Index**

| Category | Reference |
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| Adequacy of Consultation responses | AoC-xxx |
| Relevant Representations | RR-xxx |
| Procedural Decisions and Notifications from the Examining Authority Includes Examining Authority's questions, s55, and post acceptance s51 | PD-xxx |
| Additional Submissions Includes anything accepted at the Preliminary Meeting and correspondence that is either relevant to a procedural decision or contains factual information pertaining to the examination | AS-xxx |
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| AoC-003 | Kent Council Adequacy of Consultation Representation |
| AoC-004 | Swale Borough Council Adequacy of Consultation Representation |
| AoC-005 | Thurrock Council Adequacy of Consultation Representation |
| Relevant Representations | |

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| - | To assist navigation of this Examination Library, the Relevant Representations are recorded in a separate library available here: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010085/EN010085-000489-Cleve%20Hill%20RR.pdf |
| Procedural Decisions and Notifications from the Examining Authority | |
| PD-001 | Section 55 Checklist |
| PD-001A | Notification of Decision to Accept Application |
| PD-001B | Section 51 advice to the Applicant |
| PD-002 | Rule 4 Appointment of Panel - 15 March 2019 |
| PD-003 | Rule 6 letter - Notification of the preliminary meeting and matters to be discussed |
| PD-004 | Written Questions |
| PD-005 | Rule 8 - Notification of Timetable for Examination |
| PD-006 | Rule 4 - Notice of Variation to the Examining Authority |
| PD-007 | Rule 13 Letter - Notification of Hearings - September 2019 |
| PD-008 | Further Written Questions |
| PD-009 | Request for Further Information - Rule 17 |
| PD-010 | Report on the Implications for European Sites (RIES) Issued by the Examining Authority – 23 October 2019 |
| PD-011 | Request for Further Information - Rule 17 and Variation to Timetable - Rule 8(3) |
| PD-012 | Notification of the completion of the Examining Authority's Examination |
| Additional Submissions | |
| AS-001 | Cleve Hill Solar Park Ltd Response to S51 advice - Additional Submission - Accepted at the discretion of the Examining Authority |
| AS-002 | Cleve Hill Solar Park Ltd 1.3 Guide to the Application Revision B - Additional Submission - Accepted at the discretion of the Examining Authority |
| AS-003 | Cleve Hill Solar Park Ltd 2.1 Land Plan Revision B - Additional Submission - Accepted at the discretion of the Examining Authority |
| AS-004 | Cleve Hill Solar Park Ltd 2.3 Rights of Way Plan Revision B - Additional Submission - Accepted at the discretion of the Examining Authority |
| AS-005 | Cleve Hill Solar Park Ltd 2.7 Crown Land Plan Revision B - Additional Submission - Accepted at the discretion of the Examining Authority |
| AS-006 | Cleve Hill Solar Park Ltd 2.10 Open Space Land Plan Revision B - Additional Submission - Accepted at the discretion of the Examining Authority |
| AS-007 | Cleve Hill Solar Park Ltd 4.3 Book of Reference Revision B - Additional Submission - Accepted at the discretion of the Examining Authority |
| AS-008 | Cleve Hill Solar Park Ltd 7.3.1 Statement of Need Addendum March 2019 - Additional Submission - Accepted at the discretion of the Examining Authority |

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| AS-009 | Cleve Hill Solar Park Ltd The Applicant's Responses to Relevant Representations March 2019 - Additional Submission - Accepted at the discretion of the Examining Authority |
| AS-010 | Pinsent Masons LLP on behalf of Cleve Hill Solar Park Ltd Flood Defence Works and Consents August 2018 - Additional Submission - Accepted at the discretion of the Examining Authority |
| AS-011 | David Pollock Late Relevant Representation - Additional Submission - Accepted at the discretion of the Examining Authority - Objection to proposed Cleve Hill Solar Park |
| AS-012 | Graveney Rural Environment Action Team (GREAT) Additional Submission - Accepted at the discretion of the Examining Authority - Comments on the Statement of Need |
| AS-013 | Faversham and Swale East Branch Labour Party Additional Submission - accepted at the discretion of the Examining Authority - Comments the Preliminary Meeting agenda |
| AS-014 | Stephen Ledger Additional Submission – Accepted at the discretion of the Examining Authority – Comments on United Nations Global Assessment Study – May 2019 |
| AS-015 | Helen Whately MP Additional Submission - Accepted at the discretion of the Examining Authority - Concerns raised on the Statement of Need |
| AS-016 | Marie King Additional Submission – Accepted at the discretion of the Examining Authority – Response to the Funding Statement |
| AS-017 | Cleve Hill Solar Park LTD Additional Submission - Accepted at the discretion of the Examining Authority – Signed Statement of Common Ground between the Applicant and Environment Agency |
| AS-018 | Cleve Hill Solar Park LTD Additional Submission - Accepted at the discretion of the Examining Authority – Agreed Statement of Common Ground between the Applicant and Public Health England |
| AS-019 | Charles Russell Speechlys LLP on behalf of London Array Limited Additional Submission - Accepted at the discretion of the Examining Authority – Development Consent Order timetable |
| AS-020 | Swale Borough Council Additional Submission - Accepted at the discretion of the Examining Authority – Supporting information for Issue Specific Hearing 2 |
| AS-021 | Stephen Ledger Additional Submission – Accepted at the discretion of the Examining Authority – Accompanied Site Inspection Clarification |
| AS-022 | Cleve Hill Solar Park Ltd Additional Submission – Accepted at the discretion of the Examining Authority – Amended Appendix A to the Applicant’s response to Written Questions |
| AS-023 | Cleve Hill Solar Park Ltd Additional Submission - Accepted at the discretion of the Examining Authority - The Applicant’s Comments on Responses to ExQ1 |

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| AS-024 | Cleve Hill Solar Park Ltd Additional Submission - Accepted at the discretion of the Examining Authority - Accompanied Site Inspection Maps |
| AS-025 | Cleve Hill Solar Park Ltd Additional Submission accepted at the discretion of the Examining Authority - Equality Impact Assessment |
| AS-026 | Cleve Hill Solar Park Ltd Additional Submission - Accepted at the discretion of the Examining Authority - Updated ES Figure 5.3(a) |
| AS-027 | Cleve Hill Solar Park Ltd Additional Submission - Accepted at the discretion of the Examining Authority - Written Representation by the Applicant on Heritage Policy |
| AS-028 | Cleve Hill Solar Park Ltd Additional Submission - Accepted at the discretion of the Examining Authority - Progressed Statement of Common Ground between the Applicant and the Marine Management Organisation (July 2019) |
| AS-029 | Harlaxton Energy Networks Ltd Additional Submission - Accepted at the discretion of the Examining Authority – Comments on the Proposed Scheme |
| AS-030 | Cleve Hill Solar Park Ltd Additional Submission - Accepted at the discretion of the Examining Authority – Draft Development Consent Order Requirement 16 – Clean version |
| AS-031 | Cleve Hill Solar Park Ltd Additional Submission - Accepted at the discretion of the Examining Authority – Draft Development Consent Order Requirement 16 – Tracked version |
| AS-032 | Graveney Rural Environment Action Team (GREAT) Additional Submission - Accepted at the discretion of the Examining Authority – Supporting document for Open Floor Hearing 1 on 16 July 2019 |
| AS-033 | Marie King Additional Submission - Accepted at the discretion of the Examining Authority – Supporting document for Open Floor Hearing 1 on 16 July 2019 |
| AS-034 | Charles Russell Speechlys LLP on behalf of London Array Limited Additional Submission - Accepted at the discretion of the Examining Authority – Updated position between London Array Limited and the Applicant |
| AS-035 | Graveney Rural Environment Action Team (GREAT) Additional Submission - Accepted at the discretion of the Examining Authority – Statement of Need |
| AS-036 | Bryan Cave Leighton Paisner LLP on behalf of National Grid Electricity Transmission Additional Submission - Accepted at the discretion of the Examining Authority – Updated position between National Grid Electricity Transmission and the Applicant |
| AS-037 | Cleve Hill Solar Park Ltd The Applicant's response to Deadline 3 submissions made in relation to Need by GREAT and the Faversham Society. |

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| AS-038 | Dr Tim Ingram Additional Submission - Accepted at the discretion of the Examining Authority – Written Representation |
| AS-039 | Cleve Hill Solar Park Ltd Additional Submission – Accepted at the discretion of the Examining Authority – Draft Decommissioning of Requirement 16 as agreed by the Environment Agency and Swale Borough Council |
| AS-040 | Cleve Hill Solar Park Ltd Additional Submission – Accepted at the discretion of the Examining Authority - the Applicant’s Response to the Examining Authority’s Further Written Questions - ExQ2.1.12. |
| AS-041 | Dr Tim Ingram Additional Submission - Accepted at the discretion of the Examining Authority - Concerns raised on Flood Risks |
| AS-042 | Cleve Hill Solar Park Ltd Additional Submission - Accepted at the discretion of the Examining Authority - Legal Submissions on the Recent Drax Repower DCO decision and consultation by BEIS re: Energy Storage |
| AS-043 | Cleve Hill Solar Park Ltd Additional Submission - Accepted at the discretion of the Examining Authority - Cover Letter |
| AS-044 | Cleve Hill Solar Park Ltd Additional Submission - Accepted at the discretion of the Examining Authority - 2.2 - Works Plan, Revision B |
| AS-045 | Cleve Hill Solar Park Ltd Additional Submission - Accepted at the discretion of the Examining Authority - 2.8 - Streets and Access Plan, Revision B |
| AS-046 | Cleve Hill Solar Park Ltd Additional Submission - Accepted at the discretion of the Examining Authority - 3.1 - Draft Development Consent Order Revision G (clean) |
| AS-047 | Cleve Hill Solar Park Ltd Additional Submission - Accepted at the discretion of the Examining Authority - 3.1 - Draft Development Consent Order Revision G (tracked) |
| AS-048 | Cleve Hill Solar Park Ltd Additional Submission - Accepted at the discretion of the Examining Authority - Environmental Statement Clarification Note |
| AS-049 | Cleve Hill Solar Park Ltd Additional Submission - Accepted at the discretion of the Examining Authority - Schedule of Changes to the Draft Development Consent Order |
| AS-050 | Cleve Hill Solar Park Ltd Additional Submission – Accepted at the discretion of the Examining Authority - Signed Statement of Common Ground between the Applicant and Natural England. |
| AS-051 | National Grid Electricity Transmission Plc Additional Submission – Accepted at the discretion of the Examining Authority – Withdrawal of Relevant Representation |
| AS-052 | Easterly Cox |

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| | Additional Submission - Accepted at the discretion of the Examining Authority |
| AS-053 | Cleve Hill Solar Park Ltd Additional Submission - Accepted at the discretion of the Examining Authority - Development Consent Order validation Report (Revision I) |
| AS-054 | Cleve Hill Solar Park Ltd Additional Submission – Accepted at the discretion of the Examining Authority – Updated position between the Applicant and London Array Limited |
| AS-055 | Cleve Hill Solar Park Ltd Additional Submission – Accepted at the discretion of the Examining Authority – The Applicant's Response to Final Submission by Mark Montague |
| AS-056 | CPRE Kent Additional Submission – Accepted at the discretion of the Examining Authority – The effect of light pollution on aquatic and terrestrial insects |
| AS-057 | The Crown Estate Additional Submission – Accepted at the discretion of the Examining Authority – Updated position between the Applicant and the Crown Estate |
| AS-058 | Cleve Hill Solar Park Ltd Additional Submission – Accepted at the discretion of the Examining Authority - received before the Close of Examination 30 November 2019 – Response to TLT's letter dated the 12 November 2019 |
| AS-059 | Alice Beckett Additional Submission - Accepted at the discretion of the Examining Authority - Non-Interested Party submission received before the Close of Examination 30 November 2019 - Outlining concerns on the Proposed Development |
| AS-060 | TLT Solicitors LLP on behalf of Toucan Gen Co Limited Additional Submission – Accepted at the discretion of the Examining Authority - Non-Interested Party submission received before the Close of Examination 30 November 2019 – Response to the Applicant's letter dated 7 October 2019 |
| AS-061 | The Faversham Society Additional Submission - Accepted at the discretion of the Examining Authority - Comments of Battery Safety |
| AS-062 | Charles Russell Speechlys LLP on behalf of London Array Limited Additional Submission – Accepted at the discretion of the Examining Authority – Updated position and Withdrawal Letter |
| Events and Hearings | |
| Preliminary Meeting – 30 May 2019 | |
| EV-001 | Recording of Preliminary Meeting - 30 May 2019 |
| EV-001A | Preliminary Meeting Note |
| Unaccompanied Site Inspections | |
| EV-002 | Note of Unaccompanied Site Inspection - 29 May 2019 |
| EV-003 | Note of Unaccompanied Site Inspection - 31 May 2019 |
| EV-003A | Note of Unaccompanied Site Inspection - 18 July 2019 |

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| EV-003B | Note of Unaccompanied Site Inspection - 19 July 2019 |
| EV-003C | Note of Unaccompanied Site Inspection - 23 July 2019 |
| EV-003D | Note of Unaccompanied Site Inspection - 24 July 2019 |
| EV-003E | Note of Unaccompanied Site Inspection - 12 September 2019 |
| Accompanied Site Inspections and Hearings | |
| EV-004 | Agenda for Compulsory Acquisition Hearing 1 (CAH1) - 16 July 2019 |
| EV-005 | Agenda for Open Floor Hearing 1 (OFH1) - 16 July 2019 |
| EV-006 | Agenda for Issue Specific Hearing 1 (ISH1) - 17 July 2019 |
| EV-007 | Agenda for Issue Specific Hearing 2 (ISH2) - 18 July 2019 |
| EV-008 | Agenda for Open Floor Hearing 2 (OFH2) - 22 July 2019 |
| EV-009 | Agenda for Issue Specific Hearing 3 (ISH3) - 23 July 2019 |
| EV-010 | Accompanied Site Inspection (ASI) Itinerary - 24 July 2019 |
| EV-011 | Agenda for Issue Specific Hearing 4 (ISH4) - 25 July 2019 |
| EV-012 | Recording of Open Floor Hearing 1 (OFH1) - 16 July 2019 |
| EV-013 | Recording of Compulsory Acquisition Hearing 1 (CAH1) - 16 July 2019 |
| EV-014 | Action Points from Issue Specific Hearing 1 (ISH1) - 17 July 2019 |
| EV-015 | Recording of Issue Specific Hearing 1 (ISH1) - Action Points - 17 July 2019 |
| EV-016 | Recording of Issue Specific Hearing 1 (ISH1) - 17 July 2019 |
| EV-017 | Recording of Issue Specific Hearing 2 (ISH2) - 18 July 2019 |
| EV-018 | Recording of Open Floor Hearing 2 (OFH2) - 22 July 2019 |
| EV-019 | Recording of Issue Specific Hearing 3 (ISH3) - 23 July 2019 |
| EV-020 | Recording of Issue Specific Hearing 4 (ISH4) - 25 July 2019 |
| EV-021 | Agenda for Open Floor Hearing 3 (OFH3) - 10 September 2019 |
| EV-022 | Agenda for Issue Specific Hearing 5 (ISH5) on draft DCO - 10 September 2019 |
| EV-023 | Agenda for Issue Specific Hearing 6 (ISH6) on Environmental Matters - 11 September 2019 |
| EV-024 | Agenda for Compulsory Acquisition Hearing 2 (CAH2) - 12 September 2019 |
| EV-025 | Recording of Open Floor Hearing 3 (OFH3) - 10 September 2019 |
| EV-026 | Recording of Issue Specific Hearing 5 (ISH5) - 10 September 2019 |
| EV-027 | Recording of Issue Specific Hearing 6 (ISH6) - 11 September 2019 |
| EV-028 | Recording of Compulsory Acquisition Hearing 2 (CAH2) - 12 September 2019 |
| Representations | |
| Deadline 1 – 12 June 2019 | |
| <p>Deadline for receipt by the Examining Authority of:</p> <ul style="list-style-type: none"> • Notification of wish to speak at a Compulsory Acquisition Hearing (CAH); • Notification of wish to speak at an Open Floor Hearing (OFH); • Notification of wish to attend the Accompanied Site Inspection (ASI); • Submission of suggested locations / sites for the Panel to include as part of the ASI including the issues to be observed there, information on whether the site can be accessed on public land and reasoning for each nominated site; • Applicant's draft itinerary for the ASI to be held on Wednesday 24 July 2019; • Local Impact Reports (LIR) from Local Authorities. | |

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| REP1-001 | Cleve Hill Solar Park Ltd Deadline 1 Submission – The Applicant’s draft itinerary for the ASI to be held on Wednesday 24 July 2019 |
| REP1-002 | Canterbury City Council Deadline 1 Submission - Local Impact Report - Late submission accepted at the discretion of the Examining Authority |
| REP1-003 | Faversham Town Council Deadline 1 Submission - Notification of wish to speak at the Open Floor Hearings 1 and 2, and to attend the Accompanied Site Inspection |
| REP1-004 | Kent County Council Deadline 1 Submission - Local Impact Report |
| REP1-005 | Swale Borough Council Deadline 1 Submission - Local Impact Report |
| REP1-006 | Andrew Bowles Deadline 1 Submission - Notification of wish to speak at the Open Floor Hearing 1 |
| REP1-007 | Brian Jefferys Deadline 1 Submission - Notification of wish to speak at the Open Floor Hearing 1 |
| REP1-008 | Brian Jefferys Deadline 1 Submission - Notification of wish to attend the Accompanied Site Inspection |
| REP1-009 | Bruno Erasin Deadline 1 Submission - Notification of wish to speak and attend the Open Floor Hearing 1 and the Issue Specific Hearings 1, 2, 3 and 4 |
| REP1-010 | Charles Russell Speechlys LLP on behalf of London Array Limited Deadline 1 Submission - Notification of wish to speak at the Compulsory Acquisition Hearing, the Issue Specific Hearing 2 and attend the Accompanied Site Inspection |
| REP1-011 | Christopher McGowan Deadline 1 Submission - Notification of wish to attend the Accompanied Site Inspection |
| REP1-012 | CPRE Kent Deadline 1 Submission - Notification of wish to speak at the Open Floor Hearing, the Issue Specific Hearings 1 and 3 |
| REP1-013 | Faversham and Swale East Branch Labour Party Deadline 1 Submission - Notification of wish to speak at the Open Floor Hearing and attend the Accompanied Site Inspection |
| REP1-014 | Faversham Creek Trust and Convener of Faversham & Oare Heritage Harbour Group Deadline 1 Submission - Notification of wish to speak at the Issue Specific Hearing 3 and attend the Accompanied Site Inspection |
| REP1-015 | George Bull Deadline 1 Submission - Notification of wish to speak at the Open Floor Hearing 1 |
| REP1-016 | Graveney Rural Environment Action Team (GREAT) |

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| | Deadline 1 Submission - Notification of wish to speak at the Open Floor Hearings 1 and 2, and Submission of suggested locations / sites for the Panel to include as part of the ASI |
| REP1-017 | Graveney Rural Environment Action Team (GREAT) Deadline 1 Submission - Notification of wish to speak at the Issue Specific Hearing 3 |
| REP1-018 | Graveney with Goodnestone Parish Council Deadline 1 Submission - Notification of wish to speak at the Open Floor Hearings 1 and 2, the Issue Specific Hearing 3 and to attend the Accompanied Site Inspection |
| REP1-019 | Helen Whately MP Deadline 1 Submission - Notification of wish to speak at the Open Floor Hearing |
| REP1-020 | Jacky Seeds Deadline 1 Submission - Notification of wish to attend the Open Floor Hearing 1 |
| REP1-021 | Jan Pritchard Deadline 1 Submission - Notification to speak at the Open Floor Hearing and attend the Accompanied Site Inspection |
| REP1-022 | John Ellis Deadline 1 Submission - Notification of wish to speak at the Open Floor Hearing 2 |
| REP1-023 | Keith Robinson Deadline 1 Submission - Notification of wish to attend the Accompanied Site Inspection |
| REP1-024 | Kent Wildlife Trust Deadline 1 Submission - Notification of wish to attend the Accompanied Site Inspection and suggested site locations |
| REP1-025 | Marie King Deadline 1 Submission - Notification of wish to speak at the Open Floor Hearing, attend the Accompanied Site Inspection and suggested site locations |
| REP1-026 | Matthew Hatchwell Deadline 1 Submission - Notification of wish to speak at the Issue Specific Hearing 1 |
| REP1-027 | Oare Parish Council Deadline 1 Submission - Notification to attend to speak at the Open Floor Hearing and the Issue Specific Hearing 1 |
| REP1-028 | R Gomes Deadline 1 Submission - Notification of wish to speak the Open Floor Hearing 2 |
| REP1-029 | Rebecca and Simon Etheridge Deadline 1 Submission - Notification of wish to speak at the Compulsory Acquisition Hearing, the Open Floor Hearing and attend the Accompanied Site Inspection |
| REP1-030 | Richard Filipczak Deadline 1 Submission - Notification of wish to speak at the Open Floor Hearing 1 |
| REP1-031 | Rosalind Coward Deadline 1 Submission - Notification of wish to speak at the Open Floor Hearing 2 |

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| REP1-032 | Samantha Bowen Deadline 1 Submission - Notification of wish to speak at the Open Floor Hearing |
| REP1-033 | Sara Thorling Deadline 1 Submission - Notification of wish to attend the Open Floor Hearing 1 |
| REP1-034 | Shakespeare Martineau on behalf of National Grid Deadline 1 Submission - Notification of wish to reserve the right to attend the Issue Specific Hearing and the Compulsory Acquisition Hearing |
| REP1-035 | Stephen Ledger Deadline 1 Submission - Notification of wish to speak at the Issue Specific Hearings 1 and 4, and attend the Accompanied Site Inspection |
| REP1-036 | Swale Friends of the Earth Deadline 1 Submission - Notification of wish to speak at the Open Floor Hearings 1 and 2 |
| REP1-037 | The Faversham Society Deadline 1 Submission - Notification of wish to speak at the Open Floor Hearing 2 |
| REP1-038 | The Faversham Society Deadline 1 Submission - Notification of wish to speak at the Open Floor Hearing 1 by Professor Harold Goodwin |
| REP1-039 | The Faversham Society Deadline 1 Submission - Notification of wish to speak at the Open Floor Hearing 1 by Patricia Reid PhD |
| REP1-040 | The Faversham Society Deadline 1 Submission - Notification of wish to attend the Accompanied Site Inspection |
| REP1-041 | Tim Osborne Deadline 1 Submission - Notification of wish to speak at the Compulsory Acquisition Hearing, the Open Floor Hearing and to attend the Accompanied Site Inspection |
| REP1-042 | Tom King Deadline 1 Submission - Notification of wish to speak at the Open Floor Hearing, attend the Accompanied Site Inspection and suggested site locations |
| REP1-043 | Victoria Osborne Deadline 1 Submission - Notification of wish to speak at the Open Floor Hearing, attend the Accompanied Site Inspection |
| REP1-044 | Victoria Osborne Deadline 1 Submission - Submission of suggested locations / sites for the Panel to include as part of the Accompanied Site Inspection |
| REP1-045 | Wendy Pryke Deadline 1 Submission - Submission of suggested locations / sites for the Panel to include as part of the Accompanied Site Inspection |
| REP1-046 | Philippa Roddis Deadline 1 Submission – Notification to attend the Open Floor Hearing 2, the Issue Specific Hearings 3 and 4. Late submission accepted at the discretion of the Examining Authority |

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| REP1-047 | Canterbury City Council Deadline 1 Submission – Notification of wish to attend the Accompanied Site Inspection. Late submission accepted at the discretion of the Examining Authority |
| REP1-048 | Seasalter Chalet Owners Association Deadline 1 Submission – Notification of wish to attend the Accompanied Site Inspection' Late submission accepted at the discretion of the Examining Authority |
| <p>Deadline 2 – 26 June 2019</p> <p>Deadline for receipt by the ExA of:</p> <ul style="list-style-type: none"> • Responses to the ExA's Written Questions; • Written Representations (WRs); • Summaries of all WRs exceeding 1500 words; • Notification of wish to participate in Issue Specific Hearings; • Initial Statements of Common Ground requested by the ExA; • Comments on Relevant Representations (RRs); • Comments on the Applicant's response to the Planning Inspectorate's s51 advice [AS-001 to AS-010]; • An updated Guide to the Application; • The Compulsory Acquisition Schedule; • An updated version of the draft Development Consent Order (dDCO) in clean, tracked and word versions; • Comments on responses submitted for Deadline 1; • Any further information requested by the ExA under Rule 17 of the Examination Rules | |
| REP2-001 | Cleve Hill Solar Park Ltd Deadline 2 Submission - Cover letter |
| REP2-002 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 1.3 Guide to Application |
| REP2-003 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 3.1 Draft DCO |
| REP2-004 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 3.1 Draft DCO (tracked changes) |
| REP2-005 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 7.2 Mitigation Schedule (Revision B) |
| REP2-006 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.1 Response to the Examining Authority's Written Questions |
| REP2-007 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.1.1 Response to the Examining Authority's Written Questions - Appendix 1 - Glossaries |
| REP2-008 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.1.1 Response to the Examining Authority's Written Question - Appendix 2 - Transport CO2 Cost Estimation Calculation |
| REP2-009 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.1.1 Response to the Examining Authority's Written Question - Appendix 3 - Evidence review of the impact of solar farms on birds, bats and general ecology |

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| REP2-010 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.1.1 Response to the Examining Authority's Written Question - Appendix 4 - Potential Ecological Impacts of ground-mounted solar panels |
| REP2-011 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.1.1 Response to the Examining Authority's Written Question - Appendix 5 - Bird use of solar farms interim results |
| REP2-012 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.1.1 Response to the Examining Authority's Written Question - Appendix 6 - Arna Wood Solar Farm piling noise investigation |
| REP2-013 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.1.1 Response to the Examining Authority's Written Question - Appendix 7 - Arna Wood Solar Farm wintering bird mitigation report |
| REP2-014 | Cleve Hill Solar Park Ltd Deadline 2 Submission -10.1.1 Response to the Examining Authority's Written Question - Appendix 8 - Updated RIAA figure 2 |
| REP2-015 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.1.1 Response to the Examining Authority's Written Question - Appendix 9 - EN management of The Swale |
| REP2-016 | Cleve Hill Solar Park Ltd Deadline 2 Submission -10.1.1 Response to the Examining Authority's Written Question - Appendix 10 - Elver and Eel Passes |
| REP2-017 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.1.1 Response to the Examining Authority's Written Question - Appendix 11 - Unknown Plots |
| REP2-018 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.1.1 Response to the Examining Authority's Written Question - Appendix 12 - Update to Appendix B of the Statement of Reasons |
| REP2-019 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.1.1 Response to the Examining Authority's Written Question - Appendix 13 - EA Letters |
| REP2-020 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.1.1 Response to the Examining Authority's Written Question - Appendix 14 - List of Marine Developments |
| REP2-021 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.1.1 Response to the Examining Authority's Written Question - Appendix 15 - Updated Photomontages at Viewpoint 22 at year 1 |
| REP2-022 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.1.1 Response to the Examining Authority's Written Question - Appendix 15 - Updated Photomontages at Viewpoint 22 at year 5 |

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| REP2-023 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.1.1 Response to the Examining Authority's Written Question - Appendix 15 - Updated Photomontages at Viewpoint 22 at year 10 |
| REP2-024 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.1.1 Response to the Examining Authority's Written Question - Appendix 16 - Planting Heights |
| REP2-025 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.1.1 Response to the Examining Authority's Written Question - Appendix 17 - Glint and Glare Guidance |
| REP2-026 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.2.1 Written Representation - NSIP Policy and Procedure |
| REP2-027 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.2.2 - Submission on recent case law relating to appropriate assessment under Habitat Regulations Assessment |
| REP2-028 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.3.1 Initial Statement of Common Ground Tracker as requested by the Examining Authority |
| REP2-029 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.3.2 Updated Statement of Common Ground between the Applicant and Marine Management Organisation |
| REP2-030 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.3.3 Updated Statement of Common Ground between the Applicant and National Grid |
| REP2-031 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.3.4 Updated Statement of Common Ground between the Applicant and Historic England |
| REP2-032 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.4 The Compulsory Acquisition Schedule |
| REP2-033 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.5.1 Comments on Swale Borough Local Impact Report submitted at Deadline 1 |
| REP2-034 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.5.3 Comments on Kent County Council Local Impact Report submitted at Deadline 1 |
| REP2-035 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.5.2 Comments on Canterbury County Council's Local Impact Report submitted at Deadline 1 |
| REP2-036 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.6.1 The Applicant's Response to GREAT letter dated 16 April 2019 [AS-012] |
| REP2-037 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.6.1.1 Appendix 1 - Net Zero |
| REP2-038 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.6.1.1 Appendix 2 - Fiddlers Ferry Closure |
| REP2-039 | Cleve Hill Solar Park Ltd |

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| | Deadline 2 Submission - 10.6.1.1 Appendix 3 - Cottam Closure |
| REP2-040 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.6.1.1 Appendix 4 - Network Options Assessment 2017 - 18 |
| REP2-041 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.6.1.1 Appendix 5 - Network Options Assessment 2018 - 19 |
| REP2-042 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.6.2 Tracker of proposed application document amendments |
| REP2-043 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.6.3 Climate Change chapter clarification note |
| REP2-044 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.6.4 DCO Schedule of Changes |
| REP2-045 | Cleve Hill Solar Park Ltd Deadline 2 Submission - 10.6.5 Biodiversity Metric Calculations |
| REP2-046 | Pinsent Mason LLP on behalf of Cleve Hill Solar Park Deadline 2 Submission - Updated version of Statement of Common Ground between the Applicant and London Array Limited |
| REP2-047 | Canterbury City Council Deadline 2 Submission - Notification of wish to participate in the Issue Specific Hearings |
| REP2-048 | Canterbury City Council Deadline 2 Submission - Response to the Examining Authority's Written Questions |
| REP2-049 | Faversham Town Council Deadline 2 Submission - Written Representation |
| REP2-050 | Graveney with Goodnestone Parish Council Deadline 2 Submission - Written Representation |
| REP2-051 | Kent County Council Deadline 2 Submission - Cover Email and notification of wish to participate in the Issue Specific Hearings |
| REP2-052 | Kent County Council Deadline 2 Submission - Written Representation |
| REP2-053 | Kent County Council Deadline 2 Submission - Response to the Examining Authority's Written Questions |
| REP2-054 | Swale Borough Council Deadline 2 Submission - Written Representation |
| REP2-055 | Swale Borough Council Deadline 2 Submission - Notification of wish to participate in the Issue Specific Hearings |
| REP2-056 | Swale Borough Council Deadline 2 Submission - Response to the Examining Authority's Written Questions |
| REP2-057 | Swale Borough Council Deadline 2 Submission - Summary of Written Representation |
| REP2-058 | Brian Jefferys Deadline 2 Submission - Written Representation |
| REP2-059 | Brian Jefferys |

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| | Deadline 2 Submission - Supporting evidence for the oral submission for the Open Floor Hearing in July |
| REP2-060 | Bruno Erasin Deadline 2 Submission - Written Representation |
| REP2-061 | Bryan Cave Leighton Paisner LLP on behalf of National Grid PLC Deadline 2 Submission - Written Representation |
| REP2-062 | Charles Russell Speechlys LLP on behalf of London Array Limited Deadline 2 Submission - Written Representation |
| REP2-063 | Chris Lowe Deadline 2 Submission - Written Representation |
| REP2-064 | CPRE Kent Deadline 2 Submission - Cover Email |
| REP2-065 | CPRE Kent Deadline 2 Submission - Written Representation on Ecology and Biodiversity |
| REP2-066 | CPRE Kent Deadline 2 Submission - Written Representation on Flooding |
| REP2-067 | CPRE Kent Deadline 2 Submission - Written Submission on Hydrology |
| REP2-068 | CPRE Kent Deadline 2 Submission - Supporting Paper of Solar in Wetlands |
| REP2-069 | CPRE Kent Deadline 2 Submission - Supporting Paper of Solar Effects on Soil Carbon Recycling |
| REP2-070 | Environment Agency Deadline 2 Submission - Written Representation |
| REP2-071 | Environment Agency Deadline 2 Submission - Response to the Examining Authority's Written Question |
| REP2-072 | F R Gomes Deadline 2 Submission - Written Representation |
| REP2-073 | F R Gomes Deadline 2 Submission - Summary of Written Representation |
| REP2-074 | Faversham & Oare Heritage Harbour Group Deadline 2 Submission - Written Representation |
| REP2-075 | Faversham and Swale East Branch Labour Party Deadline 2 Submission - Cover Email |
| REP2-076 | Faversham and Swale East Branch Labour Party Deadline 2 Submission - Comments on Draft Accompanied Site Inspection Itinerary |
| REP2-077 | Faversham and Swale East Branch Labour Party Deadline 2 Submission - Oral submission to be presented at the Issue Specific Hearing being held on 25 July 2019 - Biodiversity/ Nature Conservation Matters |
| REP2-078 | Faversham and Swale East Branch Labour Party Deadline 2 Submission - Oral submission to be presented at the Issue Specific Hearing being held on 23 July 2019 - Landscape and Visual Impact |
| REP2-079 | Faversham and Swale East Branch Labour Party |

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| | Deadline 2 Submission - Oral submission to be presented at the Issue Specific Hearing being held on 23 July 2019 - Landscape and Visual Impact |
| REP2-080 | Faversham and Swale East Branch Labour Party Deadline 2 Submission - Written Representation in response to chapter 6.1.13 Socio-Economics and Tourism |
| REP2-081 | Faversham Creek Trust and Faversham & Oare Heritage Harbour Group Deadline 2 Submission - Cover Email and notification of wish to participate in the Issue Specific Hearings |
| REP2-082 | Faversham Creek Trust and Convener of Faversham & Oare Heritage Harbour Group Deadline 2 Submission - Written Representation |
| REP2-083 | Graveney Rural Environment Action Team (GREAT) Deadline 2 Submission - Oral Submission to be presented at the Open Floor Hearing 1 |
| REP2-084 | Graveney Rural Environment Action Team (GREAT) Deadline 2 Submission - Oral Submission to be presented at the Open Floor Hearing 2 |
| REP2-085 | Graveney Rural Action Environment Team (GREAT) Deadline 2 Submission - Written Representation on National Policy Statement |
| REP2-086 | Graveney Rural Environment Action Team (GREAT) Deadline 2 Submission - Comments on Statement of Need |
| REP2-087 | Historic England Deadline 2 Submission - Written Representation |
| REP2-088 | Historic England Deadline 2 Submission - Response to the Examining Authority's Written Questions |
| REP2-089 | Jenny Cutts Deadline 2 Submission - Written Representation |
| REP2-090 | Kent Wildlife Trust Deadline 2 Submission - Cover Email and notification of wish to participate in the Issue Specific Hearings |
| REP2-091 | Kent Wildlife Trust Deadline 2 Submission - Response to the Examining Authority's Written Questions |
| REP2-092 | Kent Wildlife Trust Deadline 2 Submission - Written Representation |
| REP2-093 | Kent Wildlife Trust Deadline 2 Submission - Summary of Written Representation |
| REP2-094 | Marie King Deadline 2 Submission - Written Representation and Response to the Examining Authority's Written Questions |
| REP2-095 | Marine Management Organisation Deadline 2 Submission - Response to the Examining Authority's Written Questions |
| REP2-096 | Natural England Deadline 2 Submission - Written Representation and Response to the Examining Authority's Written Questions |
| REP2-097 | Nigel Medhurst |

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| | Deadline 2 Submission - Oral Submission to be presented at the Open Floor Hearing 1 and the Issue Specific Hearing 4 |
| REP2-098 | Patricia Bensted Deadline 2 Submission - Written Representation |
| REP2-099 | Ramblers Deadline 2 Submission - Notification of wish to participate in the Issue Specific Hearings |
| REP2-100 | Ramblers Deadline 2 Submission - Written Representation |
| REP2-101 | Royal Society for Birds Deadline 2 Submission - Written Representation |
| REP2-102 | Sarah Jefferys Deadline 2 Submission - Written Representation |
| REP2-103 | Stephen Ledger Deadline 2 Submission - Written Representation |
| REP2-104 | Swale Green Party Deadline 2 Submission - Notification of wish to participate in the Issue Specific Hearings |
| REP2-105 | The Ely Family Deadline 2 Submission - Written Representation |
| REP2-106 | The Ely Family Deadline 2 Submission - Response to the Examining Authority's Written Question |
| REP2-107 | The Faversham Society Deadline 2 Submission - Cover Email |
| REP2-108 | The Faversham Society Deadline 2 Submission - Oral Submission to be presented at the Issue Specific Hearing 2 |
| REP2-109 | The Faversham Society Deadline 2 Submission - Oral Submission to be presented at the Issue Specific Hearing 3 |
| REP2-110 | The Faversham Society Deadline 2 Submission - Deadline 2 Submission - Oral Submission to be presented at the Issue Specific Hearing 7 on 17 July 2019 |
| REP2-111 | The Faversham Society Deadline 2 Submission - Response to the Examining Authority's Written Questions |
| REP2-112 | Tom King Deadline 2 Submission - Written Representation and Response to the Examining Authority's Written Questions |
| REP2-113 | Chala Fiske Deadline 2 Submission - Written Representation from Non-Interested Party - Accepted at the discretion of the Examining Authority |
| REP2-114 | Bruno Erasin Deadline 2 Submission - Summary of Written Representation |
| REP2-115 | Chris Lowe Deadline 2 Submission – Late submission accepted at the discretion of the Examining Authority - Summary of Written Representation |
| Deadline 3 – 01 August 2019 | |

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| <p>Deadline for receipt by the ExA of:</p> <ul style="list-style-type: none"> • Written summaries of oral submissions put at any hearings held between 16 and 25 July 2019; • Comments on LIR(s); • An updated Guide to the Application; • An updated version of the dDCO in clean, tracked and word versions; • An updated Compulsory Acquisition Schedule; • Comments on responses to the ExA's Written Questions; • Comments on responses submitted for Deadline 2; • Progressed Statements of Common Ground; • Any further information | |
| REP3-001 | Cleve Hill Solar Park Ltd Deadline 3 Submission - Cover Letter |
| REP3-002 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 1.3 Guide to the Application |
| REP3-003 | Cleve Hill Solar Park Ltd Deadline 3 Submission – Draft Development Consent Order (Clean) |
| REP3-004 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 3.1 Draft Development Consent Order (tracked) |
| REP3-005 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 6.4.5.2 Outline Landscape and Biodiversity Management Plan |
| REP3-006 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 6.4.5.4 Outline Construction Environmental Management Plan |
| REP3-007 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 6.4.11.4 Outline Written Scheme of Investigation |
| REP3-008 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 6.4.12.10 Outline Special Protection Area Construction Noise Management Plan |
| REP3-009 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 6.4.14.1 Outline Construction Traffic Management Plan |
| REP3-010 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 7.1 Outline Design Principles |
| REP3-011 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 7.2 Mitigation Schedule |
| REP3-012 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.1.1 Written Summaries of oral submissions presented at the Open Floor Hearings 1 and 2 |
| REP3-013 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.1.2 Written Summary of oral submission presented at the Compulsory Acquisition Hearing 1 |
| REP3-014 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.1.3 Written Summaries of Oral Submissions from the Issue Specific Hearing 1 on NEED |
| REP3-015 | Cleve Hill Solar Park Ltd |

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| | Deadline 3 Submission - 11.1.4 Written Summary of oral submission from presented at the Issue Specific Hearing 2 on the Draft DCO |
| REP3-016 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.1.5 Written Summary of oral submission presented at the Issue Specific Hearing 3 |
| REP3-017 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.1.6 Written Summary of oral submission presented at the Issue Specific Hearing 4 |
| REP3-018 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.2.1 Statement of Common Ground Tracker |
| REP3-019 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.2.2 Progressed Statement of Common Ground Requested by the Examining Authority - Kent Wildlife Trust |
| REP3-020 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.3.1 The Applicant's response to Written Representations received at Deadline 2 |
| REP3-021 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.1 Written Representation by the Applicant on Electrical Safety Regulations and Standards |
| REP3-022 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.2 Clarification Note on Glint and Glare |
| REP3-023 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.3 Updated RIAA - Integrity Matrices - Appendix 8 |
| REP3-024 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.4 Raw Traffic Data |
| REP3-025 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.5 Written Representation by the Applicant on CO2 Offset and Sequestration |
| REP3-026 | Cleve Hill Solar Park Ltd Deadline 3 submission - 11.4.6 Written Representation by the Applicant on Public Consultation and the Residential Visual Amenity Assessment |
| REP3-027 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.7 Landscape and Visual Cross Sections |
| REP3-028 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.8 Further Additional Cultural Heritage Visualisations |
| REP3-029 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.9 Letters of no Impediment to the Applicant from Natural England |
| REP3-030 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.10 The Applicant's Response to Great Expert Report on the Statement of Need |
| REP3-031 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.10.1 The Applicant's Response to GREAT Expert Report on the Statement of Need - Reference 1 |
| REP3-032 | Cleve Hill Solar Park Ltd |

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| | Deadline 3 Submission - 11.4.10.2 The Applicant's Response to GREAT Expert Report on the Statement of Need - Reference 2 |
| REP3-033 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.10.3 The Applicant's Response to GREAT Expert Report on the Statement of Need - Reference 3 |
| REP3-034 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.10.4 The Applicant's Response to GREAT Expert Report on the Statement of Need - Reference 4 |
| REP3-035 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.10.5 The Applicant's Response to GREAT Expert Report on the Statement of Need - Reference 5 |
| REP-036 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.10.6 The Applicant's Response to GREAT Expert Report on the Statement of Need - Reference 6 |
| REP3-037 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.10.7 The Applicant's Response to GREAT Expert Report on the Statement of Need - Reference 7 |
| REP3-038 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.10.8 The Applicant's Response to GREAT Expert Report on the Statement of Need - Reference 8 |
| REP3-039 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.10.9 The Applicant's Response to GREAT Expert Report on the Statement of Need - Reference 9 |
| REP3-040 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.10.10 The Applicants Response to GREAT Expert Report on the Statement of Need - Reference 10 |
| REP3-041 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.10.11 The Applicant's Response to GREAT Expert Report on the Statement of Need - Reference 11 |
| REP3-042 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.10.12 The Applicant's Response to GREAT Expert Report on the Statement of Need - Reference 12 |
| REP3-043 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.10.13 The Applicant's Response to GREAT Expert Report on the Statement of Need - Reference 13 |
| REP3-044 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.10.14 The Applicant's Response to GREAT Expert Report on the Statement of Need - Reference 14 |
| REP3-045 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.10.15 The Applicant's Response to GREAT Expert Report on the Statement of Need - Reference 15 |
| REP3-046 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.10.16 The Applicant's Response to GREAT Expert Report on the Statement of Need - Reference 16 |
| REP3-047 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.11 RSPB Paper - Water Management Structures for Conservation |
| REP3-048 | Cleve Hill Solar Park Ltd Deadline 3 Submission - 11.4.12 Schedule of Changes to the dDCO at Deadline 3 |
| REP3-049 | Canterbury City Council |

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| | Deadline 3 Submission - Response to Action Point 1 - Local Landscape Designation Review and Recommendations |
| REP3-050 | Faversham and Swale East Branch Labour Party Deadline 3 Submission - Request for additional Issue Specific Hearing |
| REP3-051 | Faversham Town Council Deadline 3 Submission - Written summary of oral submission presented at the Open Floor Hearing 1 |
| REP3-052 | Graveney with Goodnestone Parish Council Deadline 3 Submission - Request for additional the Issue Specific Hearings |
| REP3-053 | Graveney with Goodnestone Parish Council Deadline 3 Submission - Written summary of oral submission presented at the Open Floor Hearing 2 |
| REP3-054 | Kent County Council on behalf of Kent County Council, Swale Borough Council and Canterbury City Council Deadline 3 Submission - Response to Action Point 1 - Local Landscape Designation Review and Recommendations |
| REP3-055 | Swale Borough Council Deadline 3 Submission - Response to Action Point 1 - Local Landscape Designation Review and Recommendations |
| REP3-056 | Swale Borough Council Deadline 3 Submission - Written summary of oral submission presented at the Issue Specific Hearing 4 |
| REP3-057 | Bob Gomes Deadline 3 Submission - Written summary of oral submission presented at the Open Floor Hearing 2 |
| REP3-058 | Bruno Erasin Deadline 3 Submission - Written summary of oral submission presented at the Open Floor Hearing 1 |
| REP3-059 | Bruno Erasin Deadline 3 Submission - Written summary of oral submission presented at the Open Floor Hearing 2 |
| REP3-060 | CPRE Kent Deadline 3 Submission - Request for additional Issue Specific Hearing |
| REP3-061 | CPRE Kent Deadline 3 Submission - A written statement from Richard Knox-Johnston concerning the Open Floor Hearing of 22 July 2019 |
| REP3-062 | CPRE Kent Deadline 3 Submission - A further statement on biodiversity |
| REP3-063 | CPRE Kent Deadline 3 Submission - A written statement on aviation glare |
| REP3-064 | CPRE Kent Deadline 3 Submission - A statement on a recent SoS decision on an energy recovery facility, supported by a copy of the SoS' letter |
| REP3-065 | CPRE Kent Deadline 3 Submission - A statement on Climate Change and Carbon Sequestration, supported by a partial transcript of evidence given by the Chairman of Natural England to the Environmental Audit Committee on 23 July |

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| REP3-066 | Faversham Creek Trust Deadline 3 Submission - Written summary of oral submission presented at the Issue Specific Hearings 3 and 4 |
| REP3-067 | Faversham & Oare Heritage Harbour Group Deadline 3 Submission - Written summary of oral submission presented at the Issue Specific Hearing 3 |
| REP3-068 | The Faversham Society Deadline 3 Submission - Cover Email |
| REP3-069 | The Faversham Society Deadline 3 Submission - Request for additional Issue Specific Hearing |
| REP3-070 | The Faversham Society Deadline 3 Submission - Written summary of oral submissions presented at the Issue Specific Hearings 1 and 4 - request for additional hearings |
| REP3-071 | The Faversham Society Deadline 3 Submission - Written summary of oral submission presented at the Open Floor Hearing 2 |
| REP3-072 | Graveney Rural Environment Action Team (GREAT) Deadline 3 Submission - Request for Additional Issue Specific Hearing |
| REP3-073 | Graveney Rural Environment Action Team (GREAT) Deadline 3 Submission - Written summary of oral submission presented at the Open Floor Hearing 1 |
| REP3-074 | Graveney Rural Environment Action Team (GREAT) Deadline 3 Submission - Written summary of oral submission presented at the Open Floor Hearing 2 |
| REP3-075 | Graveney Rural Environment Action Team (GREAT) Deadline 3 Submission - Photos shown during the Accompanied Site Inspection - Taken in February 2019 |
| REP3-076 | Helen Whately MP Deadline 3 Submission - Written summary of oral submission presented at the Open Floor Hearing 1 |
| REP3-077 | Jan Pritchard Deadline 3 Submission - Written summary of oral submission presented at the Open Floor Hearing 2 |
| REP3-078 | John Ellis Deadline 3 Submission - Written summary of oral submission presented at the Open Floor Hearing 2 |
| REP3-079 | Kent Wildlife Trust Deadline 3 Submission - Response to questions raised at the Issue Specific Hearing 4 |
| REP3-080 | Marie King Deadline 3 Submission - Written summary of oral submission presented at the Open Floor Hearing 2 |
| REP3-081 | Matthew Hatchwell Deadline 3 Submission - Written summary of oral submission presented at the Open Floor Hearing 1 |
| REP3-082 | Natural England Deadline 3 Submission - Written summary of oral submission presented at the Issue Specific Hearing 4 |

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| REP3-083 | Penelope Geoghegan Deadline 3 Submission - Representation made by Interested Party - Accepted at the discretion of the Examining Authority |
| REP3-084 | Rosalind Coward Deadline 3 Submission - Written summary of oral submission presented at the Open Floor Hearing 2 |
| REP3-085 | Stephen Ledger Deadline 3 Submission - Written summaries of oral submissions presented at the Issue Specific Hearings 1 and 4 |
| REP3-086 | Swale Friends of the Earth Deadline 3 Submission - Written summary of oral submission presented at the Open Floor Hearing 1 |
| REP3-087 | Tom King Deadline 3 Submission - Written summary of oral submission presented at the Open Floor Hearing 2 |
| REP3-088 | Victoria Osborne Deadline 3 Submission - Written summary of oral submission presented at the Open Floor Hearing 1 |
| Deadline 4 – 30 August 2019 Deadline for receipt by the ExA of: <ul style="list-style-type: none"> • Responses to the ExA's FWQ (if published); • An updated Guide to the Application; • An updated version of the dDCO in clean, tracked and word versions; • An updated Compulsory Acquisition Schedule; • Comments on responses submitted for Deadline 3; • Progressed Statements of Common Ground; • Any further information requested by the ExA under Rule 17 of the Examination Rules. | |
| REP4-001 | Cleve Hill Solar Park Ltd Deadline 4 Submission - Cover Letter |
| REP4-002 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 1.3 - Guide to the Application |
| REP4-003 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 3.1 - Draft Development Consent Order |
| REP4-004 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 3.1 - Draft Development Consent Order (Tracked) |
| REP4-005 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 4.3 - Book of Reference (Clean) |
| REP4-006 | Cleve Hill Solar Park Deadline 4 Submission - 4.3 - Book of Reference (Tracked) |
| REP4-007 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 6.4.5.2 - Updates to existing documents outline Landscape and Biodiversity Management Plan |
| REP4-008 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 6.4.5.2 - Updates to existing documents outline Landscape and Biodiversity Management Plan (Tracked) |
| REP4-009 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 6.4.5.4 - Updates to existing documents outline Construction Environmental Management Plan |
| REP4-010 | Cleve Hill Solar Park Ltd |

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| | Deadline 4 Submission - 6.4.5.4 - Updates to existing documents outline Construction Environmental Management Plan (Tracked) |
| REP4-011 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 6.4.11.4 - Updates to existing documents outline Written Scheme of Investigation |
| REP4-012 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 6.4.11.4 - Updates to existing documents outline Written Scheme of Investigation (Tracked) |
| REP4-013 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 6.4.12.10 - Outline Special Protection Area - Construction Noise Management Plan (Tracked) |
| REP4-014 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 6.4.14.1 - Updates to existing documents outline Construction Traffic Management Plan |
| REP4-015 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 6.4.14.1 - Updates to existing documents outline Construction Traffic Management Plan (Tracked) |
| REP4-016 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 7.1 - Updated to existing documents outline Design Principles |
| REP4-017 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 7.1 - Updated to existing documents outline Design Principles (Tracked) |
| REP4-018 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 7.2 - Updates to Existing Documents - Mitigation Schedule |
| REP4-019 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 7.2 - Updates to Existing Documents - Mitigation Schedule (Tracked) |
| REP4-020 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.1.1 - The Applicant's responses to ExAQ2 |
| REP4-021 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.1.2 - The Applicant's responses to ExQ2 - Appendix 1 - HMSG Meeting Notes - 23 August 2019 |
| REP4-022 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.1.3 - The Applicant's responses to ExQ2 - Appendix 2 - Carrying Capacity of the Development Site for Small Mammals |
| REP4-023 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.1.4 - The Applicant's responses to ExQ2 - Appendix 3 - Northern Edge Array Spacings |
| REP4-024 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.1.5 - The Applicant's responses to ExQ2 - Appendix 4 - LPA Meeting Notes - 22 August 2019 |
| REP4-025 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.1.6 - The Applicant's responses to ExQ2 - Appendix 5 - Nagden Bump - Faversham.org Webpage Article |
| REP4-026 | Cleve Hill Solar Park Ltd |

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| | Deadline 4 Submission - 12.1.7 - The Applicant's responses to ExQ2 - Appendix 6 - Buglife and Suffolk Wildlife Trust information on Soil Mounds |
| REP4-027 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.1.8 - The Applicant's responses to ExQ2 - Appendix 7 - Reptile Habitat Management Handbook |
| REP4-028 | Cleve Hill Solar Ltd Deadline 4 Submission - 12.1.9 - The Applicant's responses to ExQ2 - Appendix 8 - Kent Fire and Rescue Service Meeting Notes - 20 August 2019 |
| REP4-029 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.1.10 - The Applicant's responses to ExQ2 - Appendix 9 - Additional cross section from the western bank of Faversham Creek and from the churchyard of the Church of St Thomas the Apostle, Harty (ES Viewpoint 14) |
| REP4-030 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.1.11 - The Applicant's responses to ExQ2 - Appendix 10 - Representative cross sections showing separation between solar PV module arrays across ditches |
| REP4-031 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.1.12 - The Applicant's responses to ExQ2 - Appendix 11 – Screened areas of the Development site from the churchyard of the Church of St Thomas the Apostle, Harty (ES Viewpoint 14) |
| REP4-032 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.1.13 - The Applicant's responses to ExQ2 - Appendix 12 – Allianz Risk Consulting - Tech Talk Volume 26: BESS |
| REP4-033 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.1.14 - The Applicant's responses to ExQ2 - Appendix 13 - Cross Section drawing of the Flood Protection Bund |
| REP4-034 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.1.15 - The Applicant's responses to ExQ2 - Appendix 14 - Missing ALC Records |
| REP4-035 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.1.16 - The Applicant's responses to ExQ2 - Appendix 15 - Overall Drainage Features Map |
| REP4-036 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.2.1 - Statement of Common Ground requested by the ExA - SOCG Tracker |
| REP4-037 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.2.2 - Statement of Common Ground between the Applicant and Swale Borough Council |
| REP4-038 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.2.3 - Statement of Common Ground between the Applicant and Historic England |
| REP4-039 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.2.4 - Statement of Common Ground between the Applicant and Natural England |
| REP4-040 | Cleve Hill Solar Park Ltd |

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| | Deadline 4 Submission - 12.2.5 - Statement of Common Ground between the Applicant and Lower Medway Internal Drainage Board |
| REP4-041 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.3.1 - The Applicant's Responses to Submissions received at Deadline 3 |
| REP4-042 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.4.1 - Compulsory Acquisition Information - Updates to Appendix A of the Statement of Reasons |
| REP4-043 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.4.2 - Compulsory Acquisition Information - Updates to Compulsory Acquisition Schedule |
| REP4-044 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.4.3 - Compulsory Acquisition Information - Updates to Compulsory Acquisition Schedule (Tracked) |
| REP4-045 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.5.1 - Outline Battery Fire Safety Management Plan |
| REP4-046 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.5.2 - Written Representation by the Applicant on Arbitration |
| REP4-047 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.5.3 - Outline Skills, Supply Chain and Employment Plan |
| REP4-048 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.5.4 - Schedule of Changes to the DDCO at Deadline 4 |
| REP4-049 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.5.5 - Schedule of Changes to the Book of Reference at Deadline 4 |
| REP4-050 | Cleve Hill Solar Park Deadline 4 Submission - 12.5.6 - Written Representation by the Applicant on Fertiliser Use |
| REP4-051 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.5.7 - Written Representation by the Applicant - Air Quality Assessment - Battery Fire |
| REP4-052 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.5.8 - Written Representation by the Applicant - Biodiversity Metrics 2.0 |
| REP4-053 | Cleve Hill Solar Park Ltd Deadline 4 Submission - 12.5.9 - Written Representation by the Applicant - Push/Pull Test Report |
| REP4-054 | Kent County Council Deadline 4 Submission - Response to ExAQ2 and comments on the Development Consent Order |
| REP4-055 | Swale Borough Council Deadline 4 Submission - Response to ExAQ2 |
| REP4-056 | Blue Transmission London Array Limited and London Array Limited Deadline 4 Submission - Updated position between the Applicant and Blue Transmission London Array Limited and London Array Limited |

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| REP4-057 | Bryan Cave Leighton Paisner LLP on behalf of National Grid Deadline 4 Submission - Response to ExAQ2 |
| REP4-058 | Chris Lowe Deadline 4 Submission - Additional Evidence for Noise impacts on birds; Land Use and effects on Carbon; the Benefits of Nature |
| REP4-059 | Chris Lowe Deadline 4 Submission - Additional Electrical Evidence |
| REP4-060 | Department for Environment, Food and Rural Affairs (DEFRA) Deadline 4 Submission - Response to ExAQ2 |
| REP4-061 | Environment Agency Deadline 4 Submission - Response to ExAQ2 |
| REP4-062 | Faversham & Oare Heritage Harbour Group Deadline 4 Submission - Response to ExAQ2 |
| REP4-063 | Graveney Rural Environment Action Team (GREAT) Deadline 4 Submission - Heritage Statement 1 |
| REP4-064 | Graveney Rural Environment Action Team (GREAT) Deadline 4 Submission - Heritage Statement 2 which includes a report on the detrimental effects of the proposed development on heritage assets in Faversham and Harty |
| REP4-065 | Graveney Rural Environment Action Team (GREAT) Deadline 4 Submission - Heritage Statement 3 advice Note on the Additional Written Representation Document on Heritage Policy & Legislation, submitted on behalf of Cleve Hill Park Solar Park Ltd |
| REP4-066 | Graveney Rural Environment Action Team (GREAT) Deadline 4 Submission - Heritage Statement 4 which includes assets that have also been identified by members of GREAT as being adversely affected by the proposed development |
| REP4-067 | Graveney Rural Environment Action Team (GREAT) Deadline 4 Submission - Response to Applicants Deadline 3 comments on GREAT's Statement of Need |
| REP4-068 | Kent Wildlife Trust Deadline 4 Submission - Responses to ExAQ2 and Notification of wish to speak at the Issue Specific Hearing 6 |
| REP4-069 | Natural England Deadline 4 Submission - Response to ExAQ2 |
| REP4-070 | Stephen Ledger Deadline 4 Submission - Evidence to support Oral Submission at the Issue Specific Hearing 5 on 10 September 2019 |
| REP4-071 | Tom King Deadline 4 Submission - Response to ExAQ2 |
| REP4-072 | Canterbury City Council Deadline 4 Submission – Late submission accepted at the discretion of the Examining Authority – Response to ExAQ2 |
| <p>Deadline 5 – 20 September 2019 Deadline for receipt by the ExA of:</p> <ul style="list-style-type: none"> • Written summaries of oral submissions put at any hearings held during the week commencing 9 September 2019 • Comments on responses to the ExA's FWQ • An updated Guide to the Application • An updated version of the dDCO in clean, tracked and word versions • An updated Compulsory Acquisition Schedule | |

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| | <ul style="list-style-type: none"> • Comments on responses submitted for Deadline 4 • Progressed Statements of Common Ground • Any further information requested by the ExA under Rule 17 of the Examination Rules. |
| REP5-001 | Cleve Hill Solar Park Ltd Deadline 5 Submission - Cover Letter |
| REP5-002 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 1.3 Guide to the Application |
| REP5-003 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 3.1 Draft Development Consent Order (Clean) |
| REP5-004 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 3.1 Draft Development Consent Order (Tracked) |
| REP5-005 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 6.4.5.4 - Updates to Existing Documents Outline Construction Environmental Management Plan |
| REP5-006 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 6.4.5.4 - Updates to Existing Documents Outline Construction Environmental Management Plan (Tracked) |
| REP5-007 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 7.1 - Updates to existing documents outline Design Principles |
| REP5-008 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 7.1 - Updates to existing documents outline Design Principles (Tracked) |
| REP5-009 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.1.1 Written Summaries of Oral Submissions for the Open Floor Hearing 3 |
| REP5-010 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.1.2 Written Summaries of Oral Submissions for the Issue Specific Hearing 5 - Draft Development Consent Order |
| REP5-011 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.1.3 Written Summaries of Oral Summaries for the Issue Specific Hearing 6 - Environmental Matters |
| REP5-012 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.1.4. Written Summaries of Oral Submissions for the Compulsory Acquisition Hearing 2 |
| REP5-013 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.2.1 Progressed Statements of Common Ground Requested by the ExA - SoCG Tracker |
| REP5-014 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.2.2 Statement of Common Ground Between the Applicant and Canterbury City Council |
| REP5-015 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.3.1 The Applicant's Comments on Responses to the Examining Authority's Further Written Questions |
| REP5-016 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.4.1 - The Applicant's Responses to Submissions Received at Deadline 4 |

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| REP5-017 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.4.2 - The Applicant's Responses to Submissions Received at Deadline 4 - Appendix 1 – TEC Register 05/09/19, National Grid ESO |
| REP5-018 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.4.3 - The Applicant's Responses to Submissions Received at Deadline 4 - Appendix 2 – Email Correspondence from Network Rail |
| REP5-019 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.4.4 - The Applicant's Responses to Submissions Received at Deadline 4 - Appendix 3 – Topographical Survey Results |
| REP5-020 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.5.1 Compulsory Acquisition Information - Updates to Appendix A of The Statement of Reasons |
| REP5-021 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.5.2 Compulsory Acquisition Information - Updates to Compulsory Acquisition Schedule |
| REP5-022 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.5.3 Compulsory Acquisition Information - Updates to Compulsory Acquisition Schedule (Tracked) |
| REP5-023 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.6.1 Topographic Map of the Application Site |
| REP5-024 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.6.2 Written Representation by the Applicant on Miscellaneous Environmental Issues |
| REP5-025 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.6.3 Landscape and Visual - Further Cross section from the Swale |
| REP5-026 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.6.4 Outline Skills, Supply Chain and Employment Plan |
| REP5-027 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.6.5 Updated LPA Meeting Notes 22 August 2019 |
| REP5-028 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.6.6 Schedule of Changes to the DDCO at Deadline 5 |
| REP5-029 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.6.7 Outline Battery Safety Management Plan |
| REP5-030 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.6.8 Outline Battery Safety Management Plan (Tracked) |
| REP5-031 | Cleve Hill Solar Park Ltd Deadline 5 Submission - 13.6.9 Outline Skills, Supply Chain and Employment Plan (Tracked) |
| REP5-032 | Kent County Council Deadline 5 Submission - Written Submission of Oral Representation presented at the Issue Specific Hearing 6 |

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| REP5-033 | Swale Borough Council Deadline 5 Submission - Written Submission of Oral Representation presented at the Issue Specific Hearing 5 (DCO) |
| REP5-034 | Bruno Erasin Deadline 5 Submission - Written summary of Oral Representation at the Open Floor Hearing 3 - Environmental Risks Objections |
| REP5-035 | Bruno Erasin Deadline 5 Submission - Written summary of Oral Representation at the Open Floor Hearing 3 - Hydrogen Fluoride Incident Management |
| REP5-036 | Bruno Erasin Deadline 5 Submission - Written summary of Oral Representation at the Open Floor Hearing 3 - Summary of all submissions |
| REP5-037 | Bruno Erasin Deadline 5 Submission - Response to Cleve Hill Solar Park air quality Lithium-ion battery report |
| REP5-038 | Bruno Erasin Deadline 5 Submission - Response to Cleve Hill Solar Park ALC report |
| REP5-039 | CPRE Kent Deadline 5 Submission - Written Submission of Oral Representation - Presented by Chris Lowed |
| REP5-040 | CPRE Kent Deadline 5 Submission - Written Submission of Oral Representation - Presented by Richard Francis |
| REP5-041 | Faversham Creek Trust Deadline 5 Submission - Written Summaries of Oral Summaries for the Issue Specific Hearing 6 - Environmental Matters |
| REP5-042 | Graveney Rural Environment Action Team (GREAT) Deadline 5 Submission - Written Summary of Oral Representation presented at the Issue Specific Hearing 6 - Comments on Traffic |
| REP5-043 | Graveney Rural Environment Action Team (GREAT) Deadline 5 Submission - Written summary of Oral Representation at the Open Floor Hearing 3 |
| REP5-044 | Graveney Rural Environment Action Team (GREAT) Deadline 5 Submission - Written summary of Oral Representation at the Open Floor Hearing 3 - additional supporting evidence |
| REP5-045 | Graveney with Goodnestone Parish Council Deadline 5 Submission - Written summary of oral representation presented at the Issue Specific Hearing 6 on Environmental Matters - supporting evidence on traffic and transport |
| REP5-046 | Graveney with Goodnestone Parish Council Deadline 5 Submission - Written summary of Oral Representation presented at the Open Floor Hearing 3 - supporting evidence on the EIA and Noise |
| REP5-047 | Graveney with Goodnestone Parish Council Deadline 5 Submission - Written summary of Oral Representation at the Open Floor Hearing 3 |
| REP5-048 | Kent Wildlife Trust Deadline 5 Submission - Written Submission of Oral Representation presented at the Issue Specific Hearing 6 |
| REP5-049 | Kent Wildlife Trust |

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| | Deadline 5 Submission - Comments on responses to the Examining Authority's Further Written Questions and Comments on responses submitted for Deadline 4 |
| REP5-050 | Natural England Deadline 5 Submission - Written Submission of Oral Representation presented at the Issue Specific Hearing 6 |
| REP5-051 | Stephen Ledger Deadline 5 Submission - Written summary of Oral Representation presented at the Open Floor Hearing 3 |
| REP5-052 | Swale Green Party Deadline 5 Submission - Written summary of Oral Representation put at the Open Floor Hearing 3 |
| REP5-053 | The Faversham Society Deadline 5 Submission - Written summary of Oral Representation presented at the Open Floor Hearing 3 |
| REP5-054 | The Faversham Society Deadline 5 Submission - Written summary of Oral Representation presented at the Open Floor Hearing 3 - supporting evidence |
| REP5-055 | Graveney Rural Environment Action Team (GREAT) Deadline 5 Submission - Written Summary of Oral Representation presented at the Issue Specific Hearing 6 - Comments on Heritage |
| REP5-056 | Faversham Creek Trust Deadline 5 Submission - Written Summaries of Oral Summaries at the Issue Specific Hearing 6 - Environmental Matters |
| Deadline 6 – 04 October 2019 Deadline for receipt by the ExA of: | |
| <ul style="list-style-type: none"> • An updated Guide to the Application; • An updated version of the dDCO in clean, tracked and word versions; • An updated Compulsory Acquisition Schedule; • Comments on responses submitted for Deadline 5; • Progressed Statements of Common Ground; • Any further information requested by the ExA under Rule 17 of the Examination Rules. | |
| REP6-001 | Cleve Hill Solar Park Ltd Deadline 6 Submission - Cover Letter |
| REP6-002 | Cleve Hill Solar Park Ltd Deadline 6 Submission - 1.3 - Guide to the Application |
| REP6-003 | Cleve Hill Solar Park Ltd Deadline 6 Submission - 3.1 - Draft Development Consent Order |
| REP6-004 | Cleve Hill Solar Park Ltd Deadline 6 Submission - 3.1 - Draft Development Consent Order (Tracked) |
| REP6-005 | Cleve Hill Solar Park Ltd Deadline 6 Submission - 6.4.5.2 - Outline Landscape and Biodiversity Management Plan |
| REP6-006 | Cleve Hill Solar Park Ltd Deadline 6 Submission - 6.4.5.2 - Outline Landscape and Biodiversity Management Plan (Tracked) |
| REP6-007 | Cleve Hill Solar Park Ltd Deadline 6 Submission - 6.4.5.4 - Outline Construction Environmental Management Plan |

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| REP6-008 | Cleve Hill Solar Park Ltd Deadline 6 Submission - 6.4.5.4 - Outline Construction Environmental Management Plan (Tracked) |
| REP6-009 | Cleve Hill Solar Park Ltd Deadline 6 Submission - 6.4.5.5 - Outline Decommissioning and Restoration Plan |
| REP6-010 | Cleve Hill Solar Park Ltd Deadline 6 Submission - 6.4.5.5 - Outline Decommissioning and Restoration Plan (Tracked) |
| REP6-011 | Cleve Hill Solar Park Ltd Deadline 6 Submission - 7.1 - Outline Design Principles |
| REP6-012 | Cleve Hill Solar Park Ltd Deadline 6 Submission - 7.1 - Outline Design Principles (Tracked) |
| REP6-013 | Cleve Hill Solar Park Ltd Deadline 6 Submission - 7.2 - Mitigation Route Map |
| REP6-014 | Cleve Hill Solar Park Ltd Deadline 6 Submission - 7.2 - Mitigation Route Map (Tracked) |
| REP6-015 | Cleve Hill Solar Park Ltd Deadline 6 Submission - 14.1.1 - The Applicant's responses to Submissions received at Deadline 5 |
| REP6-016 | Cleve Hill Solar Park Ltd Deadline 6 Submission - 14.2.1 - Progressed Statements of Common Ground requested by the Examining Authority - Statement of Common Ground Tracker |
| REP6-017 | Cleve Hill Solar Park Ltd Deadline 6 Submission - 14.3.1 - Updates to Compulsory Acquisition Schedule |
| REP6-018 | Cleve Hill Solar Park Ltd Deadline 6 Submission - 14.3.2 - Updates to Compulsory Acquisition Schedule (Tracked) |
| REP6-019 | Cleve Hill Solar Park Ltd Deadline 6 Submission - 14.4.1 - Schedule of Changes to the DDCO at Deadline 6 |
| REP6-020 | Cleve Hill Solar Park Ltd Deadline 6 Submission - 14.4.2 - Catchment Plan |
| REP6-021 | Cleve Hill Solar Park Ltd Deadline 6 Submission - 14.4.3 - Outline Battery Safety Management Plan |
| REP6-022 | Cleve Hill Solar Park Ltd Deadline 6 Submission - 14.4.4 - Outline Battery Safety Management Plan (Tracked) |
| REP6-023 | Faversham and Oare Heritage Harbour Group Deadline 6 Submission - Comments on the Applicant's responses submitted at Deadline 5 |
| REP6-024 | Faversham Creek Trust and Faversham & Oare Heritage Harbour Group Deadline 6 Submission - Concerns about the effect on wildlife - State of Nature Report |
| REP6-025 | Graveney Rural Environment Action Team (GREAT) Deadline 6 Submission - Concerns about the proposed battery storage installation |

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| REP6-026 | Graveney Rural Environment Action Team (GREAT) Deadline 6 Submission - Comments on responses submitted at Deadline 5 - Concerns of the Arable Land that will be left undeveloped |
| REP6-027 | Graveney Rural Environment Action Team (GREAT) Deadline 6 Submission - Comments on responses submitted at Deadline 5 - Involvement of Kent Fire and Rescue in the Proposed Development |
| REP6-028 | Graveney Rural Environment Action Team (GREAT) Deadline 6 Submission - Comments the Applicant's response to the Further Written Questions (2.1.15) |
| REP6-029 | Graveney Rural Environment Action Team (GREAT) Deadline 6 Submission - Request to the Examining Authority to ensure that the conditions outlined in Network Rail's email to the Applicant on 21 June 2019 are mandatory for this application |
| REP6-030 | Graveney Rural Environment Action Team (GREAT) Deadline 6 Submission - The Applicant's and KCC's comments about the connection of CW55 and CW90 |
| REP6-031 | Graveney Rural Environment Action Team (GREAT) Deadline 6 Submission - GREAT's request for clarification of the time-scale of the development |
| REP6-032 | Tom King Deadline 6 Submission – Response to the Applicant's comments Written Representation in relation to the Outline Construction Traffic Management Plan |
| <p>Deadline 7 – 13 November 2019 Deadline for receipt by the ExA of:</p> <ul style="list-style-type: none"> • Comments on the RIES (if required); • Comments on the ExA's dDCO (if required); • Any further information requested by the ExA under Rule 17 of the Examination Rules (if required); • An updated Guide to the Application; • An updated version of the dDCO in clean, tracked and word versions; • An updated Compulsory Acquisition Schedule; • Comments on responses submitted for Deadline 6; • Finalised Statements of Common Ground and S106 Agreements. | |
| REP7-001 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 1.1 - Cover Letter |
| REP7-002 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 1.3 - Guide to the Application |
| REP7-003 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 2.2 - Works Plan Revision C |
| REP7-004 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 2.8 - Streets and Access Plan Revisions C |
| REP7-005 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 3.1 - Draft Development Consent Order Revision H |
| REP7-006 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 3.1 - Draft Development Consent Order Revision H (Tracked from Revision A) |
| REP7-007 | Cleve Hill Solar Park Ltd |

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| | Deadline 7 Submission - 3.1 - Draft Development Consent Order Revision H (Tracked from Revision G) |
| REP7-008 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 3.2 - Explanatory Memorandum Revision B |
| REP7-009 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 4.3 - Book of Reference |
| REP7-010 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 4.3 - Book of Reference (Tracked) |
| REP7-011 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 5.2 - Report to Inform Appropriate Assessment (RIAA) |
| REP7-012 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 5.2 - Report to Inform Appropriate Assessment (RIAA) (Tracked) |
| REP7-013 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 6.4.5.2 - Updates to existing documents Outline Landscape and Biodiversity Management Plan |
| REP7-014 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 6.4.5.2 - Updates to existing documents Outline Landscape and Biodiversity Management Plan (Tracked) |
| REP7-015 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 6.4.5.4 - Updates to existing documents outline Construction Environmental Management Plan |
| REP7-016 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 6.4.5.4 - Updates to existing documents outline Construction Environmental Management Plan (Tracked) |
| REP7-017 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 6.4.5.5 - Updates to existing documents Outline Decommissioning and Restoration Plan |
| REP7-018 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 6.4.5.5 - Updates to existing documents Outline Decommissioning and Restoration Plan (Tracked) |
| REP7-019 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 6.4.12.10 - Updates to existing documents Outline Special Protection Area Construction Noise Management Plan |
| REP7-020 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 6.4.12.10 - Updates to existing documents Outline Special Protection Area Construction Noise Management Plan (Tracked) |
| REP7-021 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 6.4.14.1 - Updates to existing documents Outline Construction Traffic Management Plan |
| REP7-022 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 6.4.14.1 - Updates to existing documents Outline Construction Traffic Management Plan (Tracked) |
| REP7-023 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 7.1 - Updates to existing documents Outline Design Principles |
| REP7-024 | Cleve Hill Solar Park Ltd |

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| | Deadline 7 Submission - 7.1 - Updates to existing documents Outline Design Principles (Tracked) |
| REP7-025 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 7.2 - Updates to existing documents Mitigation Route Map |
| REP7-026 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 7.2 - Updates to existing documents Mitigation Route Map (Tracked) |
| REP7-027 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 15.1.1 - The Applicant's Responses to Deadline 6 Submissions |
| REP7-028 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 15.2.1 - Statement of Common Ground Tracker |
| REP7-029 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 15.2.2 - Statement of Common Ground between the Applicant and Kent County Council |
| REP7-030 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 15.3.1 - Response to the Rule 17 Letter - Request for further information |
| REP7-031 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 15.4.1 - Comments on the REIS |
| REP7-032 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 15.5.1 - Updated Compulsory Acquisition Schedule |
| REP7-033 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 15.5.2 - Updated Compulsory Acquisition Schedule (Tracked) |
| REP7-034 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 15.5.3 - Schedule of Changes to the Book of Reference |
| REP7-035 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 15.5.4 - Update to Appendix A of the Statement of Reasons |
| REP7-036 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 15.6.1 - Schedule of Changes to the draft Development Consent Order |
| REP7-037 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 15.6.2 - Written Representation by the Applicant on Marsh Harrier |
| REP7-038 | Cleve Hill Solar Park Ltd Deadline 7 Submission - 15.6.3 - The Applicant's Review of the Relevant Sections of the MEASS |
| REP7-039 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix A - List of Appendices and Overview of Process |
| REP7-040 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix B - Non Technical Summary |
| REP7-041 | Cleve Hill Solar Park Ltd |

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| | Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix C - Damage Assessment Report |
| REP7-042 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix D - Option Technical Report |
| REP7-043 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Statement of environmental particulars for Medway Estuary and Swale Strategy |
| REP7-044 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix E - Appraisal Summary Tables |
| REP7-045 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix E - Benefit Area 1 - Hoo Peninsula |
| REP7-046 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix E - Benefit Area 2 - Medway Towns |
| REP7-047 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix E - Benefit Area 3 - Upper Medway |
| REP7-048 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix E - Benefit Area 4 - Medway Marshes |
| REP7-049 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix E - Benefit Area 5 - Milton Creek and Sittingbourne |
| REP7-050 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix E - Benefit Area 6 - Swale Mainland |
| REP7-051 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix E - Benefit Area 7 - Faversham Creek |
| REP7-052 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix E - Benefit Area 8 - South Sheppey |
| REP7-053 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix E - Benefit Area 9 - Leysdown |
| REP7-054 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix E - Benefit Area 10 - Minster Cliffs |
| REP7-055 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix E - Benefit Area 11 - Sheerness |
| REP7-056 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix F - Preferred Option Expenditure Profile |
| REP7-057 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix G - Economic Assessment |
| REP7-058 | Cleve Hill Solar Park Ltd |

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| | Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix H - Implementation Plan |
| REP7-059 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix I - Modelling Report |
| REP7-060 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix J - Strategic Environmental Assessment |
| REP7-061 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix J - Strategic Environmental Assessment Appendices |
| REP7-062 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix K - Habitats Regulations Assessment |
| REP7-063 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix K - Habitat Regulation Assessment Appendices |
| REP7-064 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix L - Stakeholder Report |
| REP7-065 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix M - Carbon Optimisation Report |
| REP7-066 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix N - Risk Register |
| REP7-067 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix O - Sustainability Register |
| REP7-068 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix Q - Lessons Learnt |
| REP7-069 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix R - Partnership Funding Plan |
| REP7-070 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Appendix S - Information to the Secretary of State according to Regulations 64(5) and 66(2) of the Habitats Regulations |
| REP7-071 | Cleve Hill Solar Park Ltd Deadline 7 Submission - Medway Estuary and Swale Strategy - Strategy Appraisal Report Template for a FCRM Template |
| REP7-072 | Cleve Hill Solar Park Ltd Deadline 7 Submission – Late submission accepted at the discretion of the Examining Authority – DCO Validation Report |
| REP7-073 | Faversham Town Council Deadline 7 Submission - Objection to planning application |
| REP7-074 | Kent County Council Deadline 7 Submission - Response to Rule 17 - Request for Further Information |
| REP7-075 | Alison Keeler |

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| | Deadline 7 Submission - Objection to planning application |
| REP7-076 | Andrea Risvold Deadline 7 Submission - Objection to planning application |
| REP7-077 | Brian Jefferys Deadline 7 Submission - Additional Written Representation - Improvements for cyclists at Cleve Hill Solar Park |
| REP7-078 | Candice McGowan Deadline 7 Submission - Objection to planning application |
| REP7-079 | Carl Baganza Deadline 7 Submission - Objection to planning application |
| REP7-080 | Christopher McGowan Deadline 7 Submission - Objection to planning application |
| REP7-081 | CPRE Kent Deadline 7 Submission - Biodiversity and MEASS |
| REP7-082 | CPRE Kent Deadline 7 Submission - Comments on Cleve Hill Solar Park Ltd submission on Drax Power Station Decision and Additional Information for Deadline 7 |
| REP7-083 | David Burbridge Deadline 7 Submission - In response to deadline 6 – Outline design principles / Outline landscape and biodiversity management plan |
| REP7-084 | Diane Langford Deadline 7 Submission - Objection to planning application |
| REP7-085 | Edward Kearton Deadline 7 Submission - Objection to planning application |
| REP7-086 | Environment Agency Deadline 7 Submission - Response to Rule 17 - Request for Further Information |
| REP7-087 | Estelle Jourd Deadline 7 Submission - Newspaper article on concerns on battery safety |
| REP7-088 | Faversham and Oare Heritage Harbour Group Deadline 7 Submission - Comments on responses submitted for Deadline 6 |
| REP7-089 | Faversham and Swale East Branch Labour Party Deadline 7 Submission - Response to Rule 17 - Request for Further Information and comments on the RIES |
| REP7-090 | Faversham Society Deadline 7 Submission - Comments on responses submitted up to Deadline 6 |
| REP7-091 | Francine Raymond Deadline 7 Submission - Objection to planning application |
| REP7-092 | Frankie Hewett Deadline 7 Submission - Objection to planning application |
| REP7-093 | Gowling WLG on behalf of Blue Transmissions London Array Deadline 7 Submission - Protective Provisions agreed with the Applicant |
| REP7-094 | Graham Setterfield Deadline 7 Submission - Objection to planning application |
| REP7-095 | Graveney Rural Environment Action Team (GREAT) Deadline 7 Submission - Late Filing of Wirsol Annual Accounts |

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| REP7-096 | Graveney Rural Environment Action Team (GREAT) Deadline 7 Submission - Rare Bird Sighting |
| REP7-097 | Graveney Rural Environment Action Team (GREAT) Deadline 7 Submission - Research into the Impacts on Marsh Harrier |
| REP7-098 | Graveney Rural Environment Action Team (GREAT) Deadline 7 Submission - Battery Storage and Kent Fire & Rescue |
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| REP7-151 | Dr Tim Ingram Deadline 7 Submission – Late submission accepted at the discretion of the Examining Authority – Concerns raised about the proposed planning application |
| REP7-152 | Alan B Smith Deadline 7 Submission – Late Non-Interested Party submission accepted at the discretion of the Examining Authority – Comments on the proposed planning application |
| Rule 17 Deadline – 29 November 2019 Deadline for receipt by the ExA of: <ul style="list-style-type: none"> • Responses to the Request of Further Information(R17) requested by the Examining Authority | |
| REP17-001 | Cleve Hill Solar Park Ltd Rule 17 Deadline - Final Submission Cover Letter |
| REP17-002 | Cleve Hill Solar Park Ltd Rule 17 Deadline - 1.3 - Guide to the Application |

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| REP17-003 | Cleve Hill Solar Park Ltd Rule 17 Deadline - 3.1 - Draft Development Consent Order (CLEAN) |
| REP17-004 | Cleve Hill Solar Park Ltd Rule 17 Deadline - 3.1 - Draft Development Consent Order (Tracked from Application Version (Revision A)) |
| REP17-005 | Cleve Hill Solar Park Ltd Rule 17 Deadline - 3.1 - Draft Development Consent Order (Tracked from Application Version (Revision H)) |
| REP17-006 | Cleve Hill Solar Park Ltd Rule 17 Deadline - 3.2 - Explanatory Memorandum |
| REP17-007 | Cleve Hill Solar Park Ltd Rule 17 Deadline - 16.1.1 - The Applicant's responses to Submissions received at Deadline 7 |
| REP17-008 | Cleve Hill Solar Park Ltd Rule 17 Deadline - 16.2.1 - Statement of Common Ground Tracker |
| REP17-009 | Cleve Hill Solar Park Ltd Rule 17 Deadline - 16.2.2 - Statement of Common Ground between the Applicant and Kent Wildlife Trust |
| REP17-010 | Cleve Hill Solar Park Ltd Rule 17 Deadline - 16.3.1 - Closing Statement by the Applicant |
| REP17-011 | Cleve Hill Solar Park Ltd Rule 17 Deadline - 16.4.1 - Compulsory Acquisition Information - Updates to Appendix A of the Statement of Reasons |
| REP17-012 | Cleve Hill Solar Park Ltd Rule 17 Deadline - 16.5.1 - Other Final Submissions - Schedule of Changes to the Draft Development Consent Order at close of Examination |
| REP17-013 | Cleve Hill Solar Park Ltd Rule 17 Deadline - 16.5.2 - Other Final Submissions - Written Representation by the Applicant on Marsh Harrier |
| REP17-014 | Cleve Hill Solar Park Ltd Rule 17 Deadline - 16.5.3 - Other Final Submissions - Written Representation by the Applicant on Marsh Harrier (Tracked) |
| REP17-015 | Cleve Hill Solar Park Ltd Rule 17 Deadline - 16.5.4 - Other Final Submissions - Marine Management Organisation Confirmatory Email |
| REP17-016 | Mark Montague Please note that due to the amount of personal sensitive information contained within this representation it has been necessary for it to be de-published following the close of the examination. The unredacted version is being retained by the Planning Inspectorate and will be considered by the Examining Authority in making their recommendation to the Secretary of State. The unredacted version will also be forwarded to the Secretary of State alongside the Examining Authority's recommendation report to consider as part of making the decision on the case. Please see our Privacy Notice for further information on how we handle data submitted to us. |
| Other Documents | |
| OD-001 | CHSP - Regulation 32 Transboundary Screening |
| OD-002 | Cleve Hill Solar Park Ltd Section 56 Notification |
| OD-003 | Concerns raised in relation to the appointment of the Examining Authority and the Planning Inspectorate's response |

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| OD-004 | Response to the Kent and Medway Fire Authority's request to become an Interested Party |
| OD-005 | Further Concerns raised in relation to the appointment of the Examining Authority and the Planning Inspectorate's response |
| OD-006 | Response to further concerns raised in relation to the appointment of the Examining Authority and the Planning Inspectorate's response |

APPENDIX B: LIST OF ABBREVIATIONS

| Abbreviation or usage | Reference |
|------------------------------|---|
| AAR | Average annual rainfall |
| AEoI | Adverse Effect on Integrity |
| AHLV | Area of High Landscape Value |
| AOD | Above Ordnance Datum |
| ALC | Agricultural Land Classification |
| AONB | Area of Outstanding Natural Beauty |
| AP | Affected Person |
| APFP Regulations | The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 |
| Applicant | Cleve Hill Solar Park Ltd (see section 1.1) |
| Application | The Application for the Cleve Hill Solar Park submitted by the Applicant (see section 1.1) |
| AR HMA | Arable Reversion Habitat Management Area |
| ASA | Archaeological Study Area |
| ASI | Accompanied Site Inspection |
| BAP | Biodiversity Action Plan |
| BBPP | Breeding Bird Protection Plan |
| BEIS | The Government Department for Business, Energy and Industrial Strategy |
| BESS | Battery Energy Storage System |
| BFSMP | Battery Fire Safety Management Plan |
| BoR | Book of Reference |
| BSMP | Battery Safety Management Plan |
| BTLAL | Blue Transmission London Array Limited |
| CO ₂ | Carbon dioxide |
| CA | Compulsory acquisition |
| CaCO ₃ | Calcium carbonate |
| CAH | Compulsory Acquisition Hearing |
| CASA | Core Archaeological Study Area |
| CCA 2008 | Climate Change Act 2008 |

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| CCTV | Closed circuit television |
| CEMP | Construction Environmental Management Plan |
| CIEEM | Chartered Institute of Ecology and Environmental Management |
| CoPA | The Control of Pollution Act 1974 |
| CPRE | Campaign to Protect Rural England |
| CTMP | Construction Traffic Management Plan |
| D | Deadline |
| dB | Decibel |
| DCLG | The former Government Department for Communities and Local Government |
| DCO | Development Consent Order |
| dDCO | Draft Development Consent Order |
| DML | Deemed Marine Licence |
| dDML | Draft Deemed Marine Licence |
| DECC | The former Government Department of Energy and Climate Change |
| Defra | The Government Department for Environment, Food and Rural Affairs |
| DRP | Decommissioning and Restoration Plan |
| ECJU | European Court of Justice |
| EEA | European Economic Area |
| EIA | Environmental Impact Assessment |
| ECJU | European Court of Justice |
| EM | Explanatory Memorandum |
| EMF | Electromagnetic Field |
| EQIA | Equality Impact Assessment |
| EP | Environmental Permit |
| EPR | Infrastructure Planning (Examination Procedure) Rules 2010 |
| ES | Environmental Statement |
| ExA | Examining Authority |
| ExQ1 | First Written Questions |

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| ExQ2 | Further Written Questions |
| FCD | Field Capacity Days |
| FES 2018 | National Grid's <i>Future Energy Scenarios 2018</i> |
| FES 2019 | National Grid's <i>Future Energy Scenarios 2019</i> |
| FGM HMA | Freshwater Grazing Marsh Habitat Management Area |
| FiT | Feed-in Tariff |
| FRA | Flood Risk Assessment |
| FTE | Full Time Equivalent |
| GLVIA3 | Guidelines for Landscape and Visual Impact Assessment, third edition |
| GMG MP | Grazing Marsh Grassland Management Plan |
| GREAT | Graveney Rural Environment Action Team |
| ha | Hectare |
| HGV | Heavy Goods Vehicle |
| HMA | Habitat Management Area |
| HMSG | Habitat Management Steering Group |
| HRA | Habitats Regulations Assessment |
| HSE | Health and Safety Executive |
| IAPI | Initial Assessment of Principal Issues |
| ICNIRP | International Commission on Non-Ionizing Radiation Protection |
| IDB | Internal Drainage Board |
| IEA | Institute of Environmental Assessment (now IEMA, the Institute of Environmental Management and Assessment) |
| IP | Interested Party |
| ISH | Issue Specific Hearing |
| KFRS | Kent Fire and Rescue Service |
| KgN/ha | Kilogram of Nitrogen per hectare |
| km | Kilometre |
| KMWLP | Kent Minerals and Waste Local Plan |
| kV | Kilovolt |
| KWT | Kent Wildlife Trust |

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| L _{Aeq} | The sound pressure level in decibels, equivalent to the total sound energy over a given time period. |
| LAL | London Array Limited |
| LBCA Act | The Planning (Listed Buildings and Conservation Area) Act |
| LBMP | Landscape and Biodiversity Management Plan |
| LCA | Landscape Character Area |
| LGV | Light Goods Vehicle |
| LGM HMA | Lowland Grassland Meadow Habitat Management Area |
| Li-ion | Lithium-ion (battery) |
| LIR | Local Impact Report |
| LNR | Local Nature Reserve |
| LOAEL | Lowest Observable Adverse Effect Level |
| LoNI | Letters of No Impediment |
| LSE | Likely Significant Effects |
| LVIA | Landscape and visual impact assessment |
| m | Metres |
| MACAA2009 | Marine and Coastal Access Act 2009 |
| MEASS | Medway Estuary and Swale Strategy |
| MCZ | Marine Conservation Zone |
| MHWS | Mean High Water at Spring tides |
| MMO | Marine Management Organisation |
| MP | Member of Parliament |
| MPS | Marine Policy Statement |
| MW | Megawatt |
| MWH | Megawatt hour |
| NCN | National Cycle Network |
| NE | Natural England |
| NERC Act | The Natural Environment and Rural Communities Act |
| NETS | National Electrical Transmission System |
| NCN 1 | National Cycle Network 1 |
| NGET | National Grid Electricity Transmission PLC |

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| NNR | National Nature Reserve |
| NO ₂ | Nitrogen Dioxide |
| NOEL | No Observed Effect Level |
| NPA2017 | The Neighbourhood Planning Act 2017 |
| NPPF | National Planning Policy Framework |
| NPS | National Policy Statement |
| NPSE | Noise Policy Statement for England |
| NPS EN-1 | Overarching National Policy Statement for Energy |
| NPS EN-3 | National Policy Statement for Renewable Energy Infrastructure |
| NPS EN-5 | National Policy Statement for Electricity Networks Infrastructure |
| NSIP | Nationally Significant Infrastructure Project |
| OFGEM | The Office of Gas and Electricity Markets |
| OFH | Open Floor Hearing |
| PA2008 | Planning Act 2008 |
| PASA | Principal Archaeological Study Area |
| PEIR | Preliminary Environmental Impact Report |
| PINS | Planning Inspectorate |
| PIR | Passive infrared |
| PM | Preliminary Meeting |
| PM ₁₀ | Particulate Matter |
| PP | Protective Provision |
| PPG | Planning Practice Guidance |
| PRoW | Public Right of Way |
| PRWMP | Public Rights of Way Management Plan |
| PSED | Public Sector Equality Duty |
| PV | Photovoltaic |
| R | Requirement |
| R17.xx.xx | Rule 17 request (issued under Rule 17 of the Infrastructure Planning (Examination Procedure) Rules 2010) |
| RIAA | Report to Inform Appropriate Assessment |

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| RIES | Report on Implications for European Sites |
| RO | Renewables Obligation |
| RR | Relevant Representation |
| RSPB | The Royal Society for the Protection of Birds |
| RVAA | Residential Visual Amenity Assessment |
| S | Section |
| SAC | Special Area of Conservation |
| SI | Statutory Instrument |
| SNCB | Statutory Nature Conservation Body |
| SOAEL | Significant Observed Adverse Effect Level |
| SoCG | Statement of Common Ground |
| SoR | Statement of Reasons |
| SoS | Secretary of State |
| SPA | Special Protection Area |
| SPA CNMP | Special Protection Area Construction Noise Management Plan |
| SSCEP | Skills, Supply Chain and Employment Plan |
| SSSI | Site of Special Scientific Interest |
| The DCLG CA Guidance | Guidance Related to Procedures for the Compulsory Acquisition of Land |
| The Birds Directive | Council Directive 2009/147/EC |
| The EIA Directive | Council Directive 2011/92/EU |
| The EIA Regulations | The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 |
| The Habitats Directive | Council Directive 92/43/EEC |
| TCPA | Town and Country Planning Act 1990 |
| TP | Temporary Possession |
| UK | United Kingdom |
| UKCP09 | UK Climate Projections 2009 |
| UKCP18 | UK Climate Projections 2018 |
| UKPN | UK Power Networks |

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| USI | Unaccompanied Site Inspection |
| WACA1981 | The Wildlife and Countryside Act 1981 |
| WASA | Wider Archaeological Study Area |
| WeBS | Wetland Bird Survey |
| WFD | Water Framework Directive, Council Directive 2000/60/EC |
| WR | Written Representation |
| WWII | World War Two |
| ZTV | Zone of Theoretical Visibility |

APPENDIX C(i): THE RECOMMENDED DCO

201* No. 0000

INFRASTRUCTURE PLANNING

The Cleve Hill Solar Park Order 201[]

Made - - - - []

Coming into force - - []

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An application has been made to the Secretary of State for an order under section 37 of the Planning Act 2008 (“the 2008 Act”)(a);

The application was examined by the Examining Authority, which has made a report to the Secretary of State under section 74(2) of the 2008 Act;

The Examining Authority, having considered the application together with the documents that accompanied it, and the representations made and not withdrawn, has, in accordance with section 74 of the 2008 Act made a report and recommendation to the Secretary of State;

The Secretary of State has considered the report and recommendation of the Examining Authority, has taken into account the environmental information in accordance with regulation 4 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017(b) and has had regard to the documents and matters referred to in section 104(2) of the 2008 Act;

The Secretary of State, having decided the application, has determined to make an Order giving effect to the to the proposals comprised in the application on the terms in the opinion of the Secretary of State are not materially different from those proposed in the application.

The Secretary of State is satisfied that open space within the Order land, when burdened with any new rights authorised for compulsory acquisition under the terms of this Order, will be no less advantageous than it was before such acquisition, to the persons whom it is vested, other persons, if any, entitled to rights of common or other rights, and the public, and that, accordingly, section 132(3) of the 2008 Act applies.

(a) 2008 c.29. Section 37 was amended by section 137(5) of, and paragraph 5 of Schedule 13 to, the Localism Act 2011 (c.20). Section 74(2) was amended by paragraph 29(3) of that Schedule. Section 104(2) was amended by paragraph 49 of that Schedule and section 58 of the Marine and Coastal Access Act 2009 (c.23). Section 114 was amended by paragraph 55 of Schedule 13 to the Localism Act 2011. Section 120 was amended by section 140 of, and paragraph 60 of Schedule 13 to, that Act.

(b) S.I. 2017/572.

The Secretary of State, in exercise of the powers conferred by sections 114 and 120 of the 2008 Act makes the following Order—

PART 1

PRELIMINARY

Citation and commencement

1. This Order may be cited as the Cleve Hill Solar Park Order and comes into force on [] 201[].

Interpretation

- 2.—(1) In this Order—

“the 1961 Act” means the Land Compensation Act 1961(a);

“the 1965 Act” means the Compulsory Purchase Act 1965(b);

“the 1980 Act” means the Highways Act 1980(c);

“the 1981 Act” means the Compulsory Purchase (Vesting Declarations) Act 1981(d);

“the 1989 Act” means the Electricity Act 1989(e);

“the 1990 Act” means the Town and Country Planning Act 1990(f);

“the 1991 Act” means the New Roads and Street Works Act 1991(g);

“the 2004 Act” means the Energy Act 2004(h);

“the 2009 Act” means the Marine and Coastal Access Act 2009(i);

“authorised development” means the development and associated development described in Part 1 of Schedule 1;

“the book of reference” means the book of reference certified by the Secretary of State as the book of reference for the purposes of the Order under article 34 (certification of plans and documents, etc.);

“cable circuits” means an electrical conductor necessary to transmit electricity between two points within the authorised development and may include one or more auxiliary cables for the purpose of gathering monitoring data;

“cable systems” means an electrical conductor comprising a single 400 kilovolt circuit with three conducting cores or similar equivalent design;

“CCTV” means a closed circuit television security system;

“commence”, means, (a) in relation to works seaward of MHWS, the first carrying out of any licensed marine activities authorised by the deemed marine licence, save for pre-construction monitoring surveys approved under the deemed marine licence and (b) in respect of any other works comprised in the authorised development, save for site preparation works, the first carrying out of any material operation (as defined in section 155 of the 2008 Act) forming part of the authorised development and the words “commencement” and “commenced” must be construed accordingly;

(a) 1961 c.33.

(b) 1965 c.56.

(c) 1980 c.66.

(d) 1981 c.66.

(e) 1989 c.29.

(f) 1990 c.8.

(g) 1991 c.22. Section 48(sA) was inserted by section 124 of the Local Transport Act 2008 (C.26). Sections 78(4), 80(4), and 83(4) were amended by section 40 of, and Schedule 1 to, the Traffic Management Act 2004 (c.18).

(h) 2004 c.20.

(i) 2009 c.23.

“construction compound” means a compound including central offices, welfare facilities, accommodation facilities, and storage for construction of the authorised development;

“energy storage” means equipment used for the storage of electrical energy;

“environmental statement” means the document certified as the environmental statement by the Secretary of State for the purposes of this Order under article 34 (certification of plans and documents, etc.) as supplemented by the documents set out in Schedule 10;

“existing access road” means the existing access road between the existing substation and Seasalter Road;

“existing flood defence” means the existing bund and integrated infrastructure located beneath the path known as the Saxon Shore Way and on the north and west boundaries of the authorised development in Work No. 9;

“existing overhead line” means an 11 kilovolt overhead line owned and operated by UK Power Networks plc located to the south west of Cleve Hill within the Order limits;

“existing substation” means the existing substation at Cleve Hill Faversham ME13 9EF owned and operated by National Grid Electricity Transmission plc;

“highway” and “highway authority” have the same meaning as in the 1980 Act(a);

“inverter” means electrical equipment fitted to mounting structures required to convert direct current power generated by the solar modules to alternating current;

“land plan” means the plan or plans certified as the land plan or plans by the Secretary of State for the purposes of this Order under article 34 (certification of plans and documents, etc.);

“the location, order limits and grid coordinates plan” means the plan certified as the location, order limits and grid coordinates plan by the Secretary of State for the purposes of the Order under article 34 (certification of plans and documents, etc.);

“maintain” includes inspect, upkeep, repair, adjust, alter, remove, reconstruct and replace to the extent assessed in the environmental statement; and “maintenance” must be construed accordingly;

“MHWS” means the highest level which spring tides reach on average over a period of time;

“MMO” means the Marine Management Organisation;

“mounting structure” means a frame or rack made of galvanised steel or other material designed to support the solar modules and inverters and mounted in piles driven into the ground;

“the Order land” means the land shown on the land plans which is within the limits of land to be acquired or used and described in the book of reference;

“the Order limits” means the limits shown on the land plans and works plan within which the authorised development may be carried out and land acquired or used;

“outline battery safety management plan” means the document certified as the outline battery safety management plan by the Secretary of State for the purposes of this Order under article 34 (certification of plans and documents, etc.) and which sets out the battery safety management principles to be included in the battery safety management plan pursuant to Requirement 3 of Schedule 1, Part 2;

“outline construction environmental management plan” means the document certified as the outline construction environmental management plan by the Secretary of State for the purposes of this Order under article 34 (certification of plans and documents, etc.);

“outline decommissioning and restoration plan” means the document certified as the outline decommissioning and restoration plan by the Secretary of State for the purposes of this Order under article 34 (certification of plans and documents, etc.);

(a) “highway” is defined in section 328(1) for “highway authority” see section 1.

“outline design principles” means the document certified as the outline design principles by the Secretary of State for the purposes of this Order under article 34 (certification of plans and documents, etc.);

“outline ecological management plan” means the document certified as the outline ecological management plan by the Secretary of State for the purposes of this Order under article 34 (certification of plans and documents, etc.);

“outline landscape and biodiversity management plan” means the document certified as the outline landscape and biodiversity management plan by the Secretary of State for the purposes of this Order under article 34 (certification of plans and documents, etc.);

“outline skills, supply chain and employment plan” means the document certified as the outline skills, supply chain and employment plan by the Secretary of State for the purposes of this Order under article 34 (certification of plans and documents, etc.);

“outline special protection area construction noise management plan” means the document certified as the outline special protection area construction noise management plan by the Secretary of State for the purposes of this Order under article 34 (certification of plans and documents, etc.);

“outline written scheme of investigation” means the document certified as the outline written scheme of investigation by the Secretary of State for the purposes of this Order under article 34 (certification of plans and documents, etc.);

“permissive paths” means new access tracks providing restricted public access within the Order limits along the route shown on the rights of way plan;

“relevant planning authority” means the planning authority for the area to which the provision relates;

“requirements” means those matters set out in Part 2 of Schedule 1 (requirements) to this Order;

“rights of way plan” means the plan certified as the rights of way plan by the Secretary of State for the purposes of this Order under article 34 (certification of plans and documents, etc.);

“site preparation works” means operations consisting of pre-construction surveys and/or monitoring, site clearance, demolition work, archaeological investigations, environmental surveys, investigations for the purpose of assessing ground conditions, remedial work in respect of any contamination or other adverse ground conditions, diversion and laying of services, erection of any temporary means of enclosure, the temporary display of site notices or advertisements;

“solar module” means a solar photovoltaic panel designed to convert solar irradiance to electrical energy fitted to mounting structures;

“street” means a street within the meaning of section 48 of the 1991 Act(a), together with land on the verge of a street or between two carriageways, and includes part of a street;

“streets and access plan” means the plan certified as the streets and access plan by the Secretary of State for the purposes of this Order under article 34 (certification of plans and documents, etc.);

“street authority”, in relation to a street, has the same meaning as in Part 3 of the 1991 Act(b);

“substation” means a compound, containing electrical equipment required to switch, transform, convert electricity and provide reactive power compensation, with welfare facilities, external landscaping and means of access;

“transformer” means a structure containing electrical switch gear serving to transform electricity generated by the solar modules to a higher voltage;

(a) Section 48 was amended by section 124(2) of the Local Transport Act 2008 (c.26).

(b) “street authority” is defined in section 49, which was amended by paragraph 117 of Schedule 1 to the Infrastructure Act (c.7).

“undertaker” means Cleve Hill Solar Park Limited (company number 08904850); and

“works plan” means the plan certified as the works plan by the Secretary of State for the purposes of the Order under article 34 (certification of plans and documents, etc.).

(2) References in this Order to rights over land include references to rights to do or restrain or to place and maintain, anything in, on or under land or in the air-space above its surface and references in this Order to the imposition of restrictive covenants are references to the creation of rights over the land which interfere with the interests or rights of another and are for the benefit of land which is acquired under this Order or which is an interest otherwise comprised in the Order land.

(3) All distances, directions, capacities and lengths referred to in this Order are approximate and distances between points on a work comprised in the authorised development are to be taken to be measured along that work.

(4) Any reference in this Order to a work identified by the number of the work is to be construed as a reference to the work of that number authorised by this Order.

(5) Unless otherwise stated, references in this Order to points identified by letters are to be construed as references to the points so lettered on the works plan.

(6) The expression “includes” is to be construed without limitation unless the contrary intention appears.

PART 2

PRINCIPAL POWERS

Development consent etc. granted by the Order

3.—(1) Subject to the provisions of this Order and the requirements the undertaker is granted development consent for the authorised development to be carried out within the Order limits.

(2) Each numbered work must be situated within the corresponding numbered area shown on the works plan.

Power to maintain authorised development

4.—(1) The undertaker may at any time maintain the authorised development, except to the extent that this Order or an agreement made under this Order provides otherwise.

(2) The power to maintain conferred under paragraph (1) does not relieve the undertaker of any requirement to obtain any further licence under Part 4 (marine licensing) of the 2009 Act for offshore works not covered by the deemed marine licence.

Benefit of the Order

5.—(1) Subject to paragraph (3), the undertaker may with the written consent of the Secretary of State—

(a) transfer to another person (“the transferee”) any or all of the benefit of the provisions of this Order (including the deemed marine licence, in whole or in part) and such related statutory rights as may be agreed between the undertaker and the transferee; and

(b) grant to another person (“the lessee”) for a period agreed between the undertaker and the lessee any or all of the benefit of the provisions of the Order (including the deemed marine licences, in whole or in part) and such related statutory rights as may be so agreed,

except where paragraph (7) applies, in which case no consent of the Secretary of State is required.

(2) Where an agreement has been made in accordance with paragraph (1) references in this Order to the undertaker, except in paragraphs (5), (6) and (8), are to include references to the transferee or lessee.

(3) The undertaker must consult the Secretary of State before making an application for consent under this article by giving notice in writing of the proposed application and the Secretary of State must provide a response within four weeks of receipt of the notice.

(4) The Secretary of State must consult the MMO before giving consent to the transfer or grant to another person of the whole or part of the benefit of the provisions of the deemed marine licence.

(5) The Secretary of State must determine an application for consent made under this article within a period of eight weeks commencing on the date the application is received by the Secretary of State, unless otherwise agreed in writing with the undertaker.

(6) Where the undertaker has transferred any benefit, or for the duration of any period during which the undertaker has granted any benefit, under paragraph (1)—

- (a) the benefit transferred or granted (“the transferred benefit”) must include any rights that are conferred, and any obligations that are imposed, by virtue of the provisions to which the benefit relates;
- (b) the transferred benefit will reside exclusively with the transferee or, as the case may be, the lessee and the transferred benefit will not be enforceable against the undertaker; and
- (c) the exercise by a person of any benefits or rights conferred in accordance with any transfer or grant under paragraph (1) is subject to the same restrictions, liabilities and obligations as would apply under this Order if those benefits or rights were exercised by the undertaker.

(7) This paragraph applies to any provisions of this Order and its related statutory rights where—

- (a) the transferee or lessee is the holder of a licence under section 6 (licences authorising supply etc) of the 1989 Act; or
- (b) the time limits for claims for compensation in respect of the acquisition of land or effects upon land under this Order have elapsed and—
 - (i) no such claims have been made;
 - (ii) any such claim has been made and has been compromised or withdrawn;
 - (iii) compensation has been paid in final settlement of any such claim;
 - (iv) payment of compensation into court has taken place in lieu of settlement of any such claim; or
 - (v) it has been determined by a tribunal or court of competent jurisdiction in respect of any such claim that no compensation will be payable.

(8) Prior to any transfer or grant under this article taking effect the undertaker must give notice in writing to the Secretary of State and National Grid Electricity Transmission PLC, and if such transfer or grant relates to the exercise of powers in their area, to the MMO and the relevant planning authority.

(9) The notice required under paragraphs (3) and (8) must—

- (a) state—
 - (i) the name and contact details of the person to whom the benefit of the provisions will be transferred or granted;
 - (ii) subject to paragraph (10), the date on which the transfer will take effect;
 - (iii) the provisions to be transferred or granted;
 - (iv) the restrictions, liabilities and obligations that, in accordance with paragraph , (6)(c) will apply to the person exercising the powers transferred or granted; and
 - (v) where paragraph (7) does not apply, confirmation of the availability and adequacy of funds for compensation associated with the compulsory acquisition of the Order land; and
- (b) be accompanied by—

- (i) where relevant, a plan showing the works or areas to which the transfer or grant relates; and
- (ii) a copy of the document effecting the transfer or grant signed by the undertaker and the person to whom the benefit of the powers will be transferred or granted.

(10) The date specified under paragraph (9)(a)(ii) in respect of a notice served in respect of paragraph (8) must not be earlier than the expiry of five days from the date of the receipt of the notice.

(11) The notice given under paragraph (8) must be signed by the undertaker and the person to whom the benefit of the powers will be transferred or granted as specified in that notice.

(12) Sections 72(7) and (8) (variation, suspension, reservation and transfer) of the 2009 Act do not apply to a transfer or grant of the whole or part of the benefit of the provisions of the deemed marine licences to another person by the undertaker pursuant to an agreement under paragraph (1).

(13) The provisions of articles 8 (street works), 10 (temporary stopping up of streets), 16 (compulsory acquisition of land), 18 (compulsory acquisition of rights), 24 (temporary use of land for carrying out the authorised development) and 25 (temporary use of land for maintaining the authorised development) are to have effect only for the benefit of the named undertaker and a person who is a transferee or lessee who is also—

- (a) in respect of Work Nos. 1 to 9 a person who holds a licence under the 1989 Act; or
- (b) in respect of functions under article 8 (street works) relating to street, a street authority.

Application and modification of legislative provisions

6. The provisions of the Neighbourhood Planning Act 2017^(a) insofar as they relate to temporary possession of land under articles 24 (temporary use of land for carrying out the authorised development) and 25 (temporary use of land for maintaining the authorised development) of this Order do not apply in relation to the construction of any work or the carrying out of any operation required for the purpose of, or in connection with, the construction, operation or maintenance of any part of the authorised development.

Defence to proceedings in respect of statutory nuisance

7.—(1) Where proceedings are brought under section 82(1) (summary proceedings by a person aggrieved by statutory nuisance) of the Environmental Protection Act 1990^(b) in relation to a nuisance falling within paragraph (g) of section 79(1) (noise emitted from premises so as to be prejudicial to health or a nuisance) of that Act no order may be made, and no fine may be imposed, under section 82(2) of that Act if—

- (a) the defendant shows that the nuisance—
 - (i) relates to premises used by the undertaker for the purposes of or in connection with the construction or maintenance of the authorised development and that the nuisance is attributable to the carrying out of the authorised development in accordance with a notice served under section 60 (control of noise on construction site), or a consent given under section 61 (prior consent for work on construction site) or 65 (noise exceeding registered level), of the Control of Pollution Act 1974^(c); or
 - (ii) is a consequence of the construction or maintenance of the authorised development and that it cannot reasonably be avoided; or
- (b) the defendant shows that the nuisance is a consequence of the use of the authorised development and that it cannot reasonably be avoided.

(a) 2017 c.20.

(b) 1990 c.43 There are amendments to this Act which are not relevant to the Order.

(c) 1974 c.40. Sections 61(9) and 65(8) were amended by section 162 of, and paragraph 15 of Schedule 3 to, the Environmental Protection Act 1990, c.25. There are other amendments to the 1974 Act which are not relevant to the Order.

(2) Section 61(9) (consent for work on construction site to include statement that it does not of itself constitute a defence to proceedings under section 82 of the Environmental Protection Act 1990) of the Control of Pollution Act 1974 and section 65(8) of that Act (corresponding provision in relation to consent for registered noise level to be exceeded), do not apply where the consent relates to the use of premises by the undertaker for purposes of, or, in connection with, the construction or maintenance of the authorised development.

PART 3 STREETS

Street works

8.—(1) The undertaker may, for the purposes of the authorised development, enter on so much of any of the streets specified in Schedule 2 (Streets subject to street works) as is within the Order limits and may—

- (a) break up or open the street, or any sewer, drain or tunnel under it;
- (b) drill, tunnel or bore under the street;
- (c) place and keep apparatus under the street;
- (d) maintain apparatus in the street, change its position or remove it;
- (e) repair, replace or otherwise alter the surface or structure of it; and
- (f) execute any works required for or incidental to any works referred to in sub-paragraphs (a) to (d).

(2) The authority given by paragraph (1) is a statutory right for the purposes of sections 48(3) (streets, street works and undertakers) and 51(1) (prohibition of unauthorised street works) of the 1991 Act.

(3) In this article “apparatus” has the same meaning as in Part 3 of the 1991 Act.

Application of the 1991 Act

9.—(1) The provisions of the 1991 Act mentioned in paragraph (2) that apply in relation to the carrying out of street works under that Act and any regulations made or code of practice issued or approved under those provisions apply (with all necessary modifications) in relation to—

- (a) the carrying out of works under article 8 (street works); and
- (b) the temporary stopping up, temporary alteration or temporary diversion of a street by the undertaker under article 11 (temporary stopping up of streets),

whether or not the carrying out of the works or the stopping up, alteration or diversion constitutes street works within the meaning of that Act.

(2) The provisions of the 1991 Act^(a) are—

- (a) subject to paragraph (3), section 55 (notice of starting date of works);
- (b) section 57 (notice of emergency works);
- (c) section 60 (general duty of undertakers to co-operate);
- (d) section 68 (facilities to be afforded to street authority);
- (e) section 69 (works likely to affect other apparatus in the street);
- (f) section 76 (liability for cost of temporary traffic regulation);
- (g) section 77 (liability for cost of use of alternative route); and

^(a) Sections 55, 57, 60, 68 and 69 were amended by the Traffic Management Act 2004 (c.18).

- (h) all provisions of that Act that apply for the purposes of the provisions referred to in subparagraphs (a) to (g).

(3) Section 55 of the 1991 Act as applied by paragraph (2) has effect as if references in section 57 of that Act to emergency works included a reference to a stopping up, alteration or diversion (as the case may be) required in a case of emergency.

Temporary stopping up of streets

10.—(1) The undertaker, during and for the purposes of carrying out the authorised development, may temporarily stop up, alter or divert any street and may for any reasonable time—

- (a) divert the traffic or a class of traffic from the street; and
- (b) subject to paragraph (3), prevent all persons from passing along the street.

(2) Without limiting paragraph (1), the undertaker may use any street temporarily stopped up under the powers conferred by this article within the Order limits as a temporary working site.

(3) The undertaker must provide reasonable access for pedestrians going to or from premises abutting a street affected by the temporary stopping up, alteration or diversion of a street under this article if there would otherwise be no such access.

(4) Without limiting paragraph (1), the undertaker may temporarily stop up, alter or divert the streets set out in column (2) of Schedule 3 (streets to be temporarily stopped up) to the extent specified, by reference to the letters and numbers shown on the streets and access plan, in column (3) of that Schedule.

(5) The undertaker must not temporarily stop up, alter, divert or use as a temporary working site—

- (a) any street referred to in paragraph (4) without first consulting the street authority; and
- (b) any other street without the consent of the street authority, which may attach reasonable conditions to the consent.

(6) Any person who suffers loss by the suspension of any private right of way under this article is entitled to compensation to be determined, in case of dispute, under Part 1 (determination of questions of disputed compensation) of the 1961 Act.

(7) If a street authority fails to notify the undertaker of its decision within 28 days of receiving an application for consent under paragraph (5)(b) that street authority is deemed to have granted consent.

Temporary stopping up of public rights of way

11. The undertaker may, in connection with the carrying out of the authorised development, temporarily stop up each of the public rights of way specified in column (2) of Schedule 4 (public rights of way to be temporarily stopped up) to the extent specified in column (3), by reference to the letters shown on the rights of way plan.

Agreements with street authorities

12.—(1) A street authority and the undertaker may enter into agreements with respect to—

- (a) any temporary stopping up, alteration or diversion of a street authorised by this Order; or
- (b) the carrying out in the street of any of the works referred to in article 8(1) (street works).

(2) Such agreement may, without prejudice to the generality of paragraph (1)—

- (a) make provision for the street authority to carry out any function under this Order which relates to the street in question;
- (b) include an agreement between the undertaker and street authority specifying a reasonable time for the completion of the works; and
- (c) contain such terms as to payment and otherwise as the parties consider appropriate.

PART 4

SUPPLEMENTAL POWERS

Discharge of water

13.—(1) The undertaker may use any watercourse or any public sewer or drain for the drainage of water in connection with the carrying out or maintenance of the authorised development and for that purpose may lay down, take up and alter pipes and may, on any land within the Order limits, make openings into, and connections with, the watercourse, public sewer or drain subject to the obtaining of consent and approval respectively pursuant to paragraphs (3) and (4) below.

(2) Any dispute arising from the making of connections to or the use of a public sewer or drain by the undertaker pursuant to paragraph (1) is determined as if it were a dispute under section 106 (right to communicate with public sewers) of the Water Industry Act 1991^(a) (right to communicate with public sewers).

(3) The undertaker must not discharge any water into any watercourse, public sewer or drain except with the consent of the person to whom it belongs; and such consent may be given subject to such terms and conditions as that person may reasonably impose, but must not be unreasonably withheld.

(4) The undertaker must not carry out any works to any public sewer or drain pursuant to article 13(1) except—

- (a) in accordance with plans approved by the person to whom the sewer or drain belongs, but such approval must not be unreasonably withheld; and
- (b) where that person has been given the opportunity to supervise the making of the opening.

(5) The undertaker must not, in carrying out or maintaining works pursuant to this article damage or interfere with the bed or banks of any watercourse forming part of a main river.

(6) The undertaker must take such steps as are reasonably practicable to secure that any water discharged into a watercourse or public sewer or drain pursuant to this article is as free as may be practicable from gravel, soil or other solid substance, oil or matter in suspension.

(7) This article does not authorise the entry into controlled waters of any matter whose entry or discharge into controlled waters is prohibited by regulation 12 (requirement for environmental permit) of the Environmental Permitting (England and Wales) Regulations 2016^(b).

(8) In this article—

- (a) “public sewer or drain” means a sewer or drain which belongs to a sewerage undertaker, the Environment Agency, an internal drainage board or a local authority; and
- (b) other expressions, excluding watercourse, used both in this article and in the Environmental Permitting (England and Wales) Regulations 2016 have the same meaning as in those Regulations.

(9) If a person who receives an application for consent or approval fails to notify the undertaker of a decision within 28 days of receiving an application for consent under paragraph (3) or approval under paragraph (4)(a) that person is deemed to have granted consent or given approval, as the case may be.

Protective work to buildings

14.—(1) Subject to the following provisions of this article, the undertaker may at its own expense carry out such protective works to any building located within the Order limits as the undertaker considers necessary or expedient.

(a) 1991 c.56. Section 106 was amended by section 35(8)(a) of the Competition and Service (Utilities) Act 1992 (c.43) and sections 36(2) and 99 of the Water Act 2003 (c.37). There are other amendments to this section which are not relevant to this Order.

(b) S.I. 2016/1154.

(2) Protective works may be carried out—

- (a) at any time before or during the carrying out in the vicinity of the building of any part of the authorised development; or
- (b) after the completion of that part of the authorised development in the vicinity of the building at any time up to the end of the period of five years beginning with the day on which that part of the authorised development is first opened for use.

(3) For the purpose of determining how the powers under this article are to be exercised, the undertaker may enter and survey any building falling within paragraph (1) and any land within its curtilage.

(4) For the purpose of carrying out protective works under this article to a building, the undertaker may (subject to paragraphs (5) and (6))—

- (a) enter the building and any land within its curtilage; and
- (b) where the works cannot be carried out reasonably conveniently without entering land that is adjacent to the building but outside its curtilage, enter the adjacent land (but not any building erected on it).

(5) Before exercising—

- (a) a power under paragraph (1) to carry out protective works to a building;
- (b) a power under paragraph (3) to enter a building and land within its curtilage;
- (c) a power under paragraph (4)(a) to enter a building and land within its curtilage; or
- (d) a power under paragraph (4)(b) to enter land,

the undertaker must, except in the case of emergency, serve on the owners and occupiers of the building or land not less than 14 days' notice of its intention to exercise the power and, in a case falling within sub-paragraph (a) or (c), specifying the protective works proposed to be carried out.

(6) Where a notice is served under paragraph (5)(a), (c) or (d), the owner or occupier of the building or land concerned may, by serving a counter-notice within the period of 10 days beginning with the day on which the notice was served, require the question of whether it is necessary or expedient to carry out the protective works or to enter the building or land to be referred to arbitration under article 35 (arbitration).

(7) The undertaker must compensate the owners and occupiers of any building or land in relation to which powers under this article have been exercised for any loss or damage arising to them by reason of the exercise of the powers.

(8) Where—

- (a) protective works are carried out under this article to a building; and
- (b) within the period of five years beginning with the day on which the part of the authorised development carried out in the vicinity of the building is first opened for use it appears that the protective works are inadequate to protect the building against damage caused by the carrying out or use of that part of the authorised development,

the undertaker must compensate the owners and occupiers of the building for any loss or damage sustained by them.

(9) Nothing in this article relieves the undertaker from any liability to pay compensation under section 152 (compensation in case where no right to claim in nuisance) of the 2008 Act.

(10) Any compensation payable under paragraph (7) or (8) must be determined, in case of dispute, under Part 1 of the 1961 Act.

(11) In this article “protective works”, in relation to a building, means—

- (a) underpinning, strengthening and any other works the purpose of which is to prevent damage that may be caused to the building by the carrying out, maintenance or use of the authorised development; and
- (b) any works the purpose of which is to remedy any damage that has been caused to the building by the carrying out, maintenance or use of the authorised development.

Authority to survey and investigate the land

15.—(1) The undertaker may for the purposes of this Order enter on any land shown within the Order limits or which may be affected by the authorised development and—

- (a) survey or investigate the land;
- (b) without prejudice to the generality of sub-paragraph (a), make trial holes in such positions on the land as the undertaker thinks fit to investigate the nature of the surface layer and subsoil and remove soil samples;
- (c) without prejudice to the generality of sub-paragraph (a), carry out ecological or archaeological investigations on such land; and
- (d) place on, leave on and remove from the land apparatus for use in connection with the survey and investigation of land and making of trial holes.

(2) No land may be entered or equipment placed or left on or removed from the land under paragraph (1) unless at least 14 days' notice has been served on every owner and occupier of the land.

(3) Any person entering land under this article on behalf of the undertaker—

- (a) must, if so required on entering the land, produce written evidence of their authority to do so; and
- (b) may take with them such vehicles and equipment as are necessary to carry out the survey or investigation or to make the trial holes.

(4) No trial holes may be made under this article—

- (a) in land held by or in right of the Crown without the consent of the Crown;
- (b) in land located within the highway boundary without the consent of the highway authority; or
- (c) in a private street without the consent of the street authority,

but such consent must not be unreasonably withheld.

(5) The undertaker must compensate the owners and occupiers of the land for any loss or damage arising by reason of the exercise of the authority conferred by this article, such compensation to be determined, in case of dispute, under Part 1 (determination of questions of disputed compensation) of the 1961 Act.

(6) If either a highway authority or a street authority which receives an application for consent fails to notify the undertaker of its decision within 28 days of receiving the application for consent—

- (a) under paragraph (4)(b) in the case of a highway authority; or
- (b) under paragraph (4)(c) in the case of a street authority,

that authority is deemed to have granted consent.

(7) Section 13 (refusal to give possession to acquiring authority) of the 1965 Act applies to the entry onto, or possession of land under this article to the same extent as it applies to the compulsory acquisition of land under this Order by virtue of section 125 (application of compulsory acquisition provisions) of the 2008 Act.

PART 5

POWERS OF ACQUISITION

Compulsory acquisition of land

16.—(1) The undertaker may acquire compulsorily so much of the Order land as is required for the authorised development or to facilitate, or is incidental, to it.

(2) This article is subject to paragraph (2) of article 18 (compulsory acquisition of rights) and article 24 (temporary use of land for carrying out the authorised development).

Time limit for exercise of authority to acquire land compulsorily

17.—(1) After the end of the period of 5 years beginning on the day on which this Order is made—

- (a) no notice to treat is to be served under Part 1 (compulsory purchase under Acquisition of Land Act 1946) of the 1965 Act; and
- (b) no declaration is to be executed under section 4 (execution of declaration) of the 1981 Act as applied by article 20 (application of the Compulsory Purchase (Vesting Declarations) Act 1981).

(2) The authority conferred by article 24 (temporary use of land for carrying out the authorised development) ceases at the end of the period referred to in paragraph (1), except that nothing in this paragraph prevents the undertaker remaining in possession of land after the end of that period, if the land was entered and possession was taken before the end of that period.

Compulsory acquisition of rights

18.—(1) Subject to paragraph (2), the undertaker may acquire compulsorily such rights or impose restrictive covenants over the Order land as may be required for any purpose for which that land may be acquired under article 16 (compulsory acquisition of land), by creating them as well as by acquiring rights already in existence.

(2) Subject to the provisions of this paragraph, article 19 (private rights) and article 26 (statutory undertakers), in the case of the Order land specified in column (1) of Schedule 5 (land in which only new rights etc. may be acquired) the undertaker's powers of compulsory acquisition are limited to the acquisition of such new rights and the imposition of restrictive covenants for the purpose specified in relation to that land in column (2) of that Schedule.

(3) Subject to section 8 (other provisions as to divided land) of the 1965 Act, and Schedule 2A (counter-notice requiring purchase of land) (as substituted by paragraph 10 of Schedule 6 (modification of compensation and compulsory purchase enactments for the creation of new rights and imposition of new restrictions), where the undertaker creates or acquires an existing right over land or restrictive covenant under paragraph (1), the undertaker is not required to acquire a greater interest in that land.

(4) Schedule 6 (modification of compensation and compulsory purchase enactments for creation of new rights) has effect for the purpose of modifying the enactments relating to compensation and the provisions of the 1965 Act in their application in relation to the compulsory acquisition under this article of a right over land by the creation of a new right or the imposition of restrictive covenants.

(5) In any case where the acquisition of new rights or imposition of a restriction under paragraph (1) or (2) is required for the purpose of diverting, replacing or protecting apparatus of a statutory undertaker, the undertaker may, with the consent of the Secretary of State, transfer the power to acquire such rights to the statutory undertaker in question.

(6) The exercise by a statutory undertaker of any power in accordance with a transfer under paragraph (5) is subject to the same restrictions, liabilities and obligations as would apply under this Order if that power were exercised by the undertaker.

Private rights

19.—(1) Subject to the provisions of this article, all private rights or restrictive covenants over land subject to compulsory acquisition under article 16 (compulsory acquisition of land) cease to have effect in so far as their continuance would be inconsistent with the exercise of the powers under article 16 (compulsory acquisition of land)—

- (a) as from the date of acquisition of the land by the undertaker, whether compulsorily or by agreement; or
- (b) on the date of entry on the land by the undertaker under section 11(1) (power of entry) of the 1965 Act,

whichever is the earliest.

(2) Subject to the provisions of this article, all private rights or restrictive covenants over land subject to the compulsory acquisition of rights or the imposition of restrictive covenants under article 18 (compulsory acquisition of rights) cease to have effect in so far as their continuance would be inconsistent with the exercise of the right or compliance with the restrictive covenant—

- (a) as from the date of the acquisition of the right or the imposition of the restrictive covenant by the undertaker (whether the right is acquired compulsorily, by agreement or through the grant of lease of the land by agreement); or
- (b) on the date of entry on the land by the undertaker under section 11(1) of the 1965 Act (power of entry) in pursuance of the right,

whichever is the earliest.

(3) Subject to the provisions of this article, all private rights or restrictive covenants over land of which the undertaker takes temporary possession under this Order are suspended and unenforceable, in so far as their continuance would be inconsistent with the purpose for which temporary possession is taken, for as long as the undertaker remains in lawful possession of the land.

(4) Any person who suffers loss by the extinguishment or suspension of any private right or restrictive covenants under this article is entitled to compensation in accordance with the terms of section 152 of the 2008 Act to be determined, in case of dispute, under Part 1 of the 1961 Act.

(5) This article does not apply in relation to any right to which section 138 (extinguishment of rights, and removal of apparatus, of statutory undertakers etc.) of the 2008 Act or article 26 (statutory undertakers) applies.

(6) Paragraphs (1) to (3) have effect subject to—

- (a) any notice given by the undertaker before—
 - (i) the completion of the acquisition of the land or the acquisition of rights or the imposition of restrictive covenants over or affecting the land;
 - (ii) the undertaker's appropriation of the land;
 - (iii) the undertaker's entry onto the land; or
 - (iv) the undertaker's taking temporary possession of the land,
 that any or all of those paragraphs do not apply to any right specified in the notice; or
- (b) any agreement made at any time between the undertaker and the person in or to whom the right in question is vested or belongs.

(7) If an agreement referred to in paragraph (6)(b)—

- (a) is made with a person in or to whom the right is vested or belongs; and
- (b) is expressed to have effect also for the benefit of those deriving title from or under that person,

the agreement is effective in respect of the persons so deriving title, whether the title was derived before or after the making of the agreement.

(8) Reference in this article to private rights over land includes reference to any trusts or incidents to which the land is subject.

Application of the 1981 Act

20.—(1) The 1981 Act applies as if this Order were a compulsory purchase order.

(2) The 1981 Act, as applied by paragraph (1), has effect with the following modifications.

(3) In section 1 (application of act), for subsection 2 substitute—

“(2) This section applies to any Minister, any local or other public authority or any other body or person authorised to acquire land by means of a compulsory purchase order.”.

(4) In section 5(2) (earliest date for execution of declaration) omit the words from “and this subsection” to the end.

(5) Section 5A (time limit for general vesting declaration) is omitted(a).

(6) In section 5B(1) (extension of time limit during challenge) for “section 23 (application to High Court in respect of compulsory purchase order) of the Acquisition of Land Act 1981, the three year period mentioned in section 5A” substitute “section 118 (legal challenges relating to applications for orders granting development consent) of the 2008 Act the five year period mentioned in article 17 (time limit for exercise of authority to acquire land compulsorily) of the Cleve Hill Solar Park Order 201[]”.

(7) In section 6 (notices after execution of declaration), in subsection (1)(b) for “section 15 of, or paragraph 6 of Schedule 1 to, the Acquisition of Land Act 1981” substitute “section 134 (notice of authorisation of compulsory acquisition) of the Planning Act 2008”.

(8) In section 7 (constructive notice to treat), in subsection (1)(a), omit the words “(as modified by section 4 of the Acquisition of Land Act 1981)”.

(9) In Schedule A1 (counter-notice requiring purchase of land not in general vesting declaration), for paragraph 1(2) substitute—

“But see article 21(3) (acquisition of subsoil only) of the Cleve Hill Solar Park Order 201[], which excludes the acquisition of subsoil only from this Schedule.”.

(10) References to the 1965 Act in the 1981 Act must be construed as references to the 1965 Act as applied by section 125 (application of compulsory acquisition provisions) of the 2008 Act (and as modified by article 22 (modification of Part 1 of the Compulsory Purchase Act 1965) to the compulsory acquisition of land under this Order.

Acquisition of subsoil only

21.—(1) The undertaker may acquire compulsorily so much of, or such rights in, the subsoil of the land referred to in paragraph (1) of article 16 (compulsory acquisition of land) or article 18 (compulsory acquisition of rights) as may be required for any purpose for which that land may be acquired under that provision instead of acquiring the whole of the land.

(2) Where the undertaker acquires any part of, or rights in, the subsoil of land under paragraph (1), the undertaker is not required to acquire an interest in any other part of the land.

(3) The following do not apply in connection with the exercise of the power under paragraph (1) in relation to subsoil only—

- (a) Schedule 2A (counter-notice requiring purchase of land not in notice to treat) to the 1965 Act;
- (b) Schedule A1 (counter-notice requiring purchase of land not in general vesting declaration) to the 1981 Act; and
- (c) Section 153(4A) (blighted land: proposed acquisition of part interest; material detriment test) of the Town and Country Planning Act 1990.

(4) Paragraphs (2) and (3) are to be disregarded where the undertaker acquires a cellar, vault, arch or other construction forming part of a house, building or manufactory.

(a) Section 5A to the 1981 Act was inserted by section 182(2) of the Housing and Planning Act 2016 (c.22).

Modification of Part 1 of the Compulsory Purchase Act 1965

22.—(1) Part 1 (compulsory acquisition under Acquisition of Land Act 1946) of the 1965 Act, as applied to this Order by section 125 (application of compulsory acquisition provisions) of the 2008 Act, is modified as follows.

- (2) In section 4A(1) (extension of time limit during challenge)—
- (a) for “section 23 of the Acquisition of Land Act 1981 (application to High Court in respect of compulsory purchase order), the three year period mentioned in section 4” substitute “section 118 of the 2008 Act (legal challenges relating to applications for orders granting development consent)”; and
 - (b) for “the three year period specified in section 4” substitute “the seven year period mentioned in article 17 (time limit for exercise of authority to acquire land compulsorily) of the Cleve Hill Solar Park Order 201[]”.
- (3) In section 11A (powers of entry: further notice of entry)—
- (a) in subsection (1)(a), after “land” insert “under that provision”; and
 - (b) in subsection (2), after “land” insert “under that provision”.
- (4) In section 22(2) (expiry of time limit for exercise of compulsory purchase power not to affect acquisition of interests omitted from purchase), for “section 4 of this Act” substitute “article 17 (time limit for exercise of authority to acquire land compulsorily) of the Cleve Hill Solar Park Order 201[]”.
- (5) In Schedule 2A (counter-notice requiring purchase of land not in notice to treat)—
- (a) for paragraphs 1(2) and 14(2) substitute—
“But see article 21(3) (acquisition of subsoil only) of the Cleve Hill Solar Park Order 201[], which excludes the acquisition of subsoil only from this Schedule”; and
 - (b) at the end insert—

“PART 4

INTERPRETATION

30. In this Schedule, references to entering on and taking possession of land do not include doing so under article 14 (protective works to buildings), article 24 (temporary use of land for carrying out the authorised development) or article 25 (temporary use of land for maintaining the authorised development) of the Cleve Hill Solar Park Order 201[].”.

Rights under or over streets

23.—(1) The undertaker may enter on and appropriate so much of the subsoil of or air-space over any street within the Order limits as may be required for the purposes of the authorised development and may use the subsoil or air-space for those purposes or any other purpose ancillary to the authorised development.

(2) Subject to paragraph (3), the undertaker may exercise any power conferred by paragraph (1) in relation to a street without being required to acquire any part of the street or any easement or right in the street.

(3) Paragraph (2) does not apply in relation to—

- (a) any subway or underground building; or
- (b) any cellar, vault, arch or other construction in, on or under a street which forms part of a building fronting onto the street.

(4) Subject to paragraph (5), any person who is an owner or occupier of land appropriated under paragraph (1) without the undertaker acquiring any part of that person’s interest in the land, and who suffers loss as a result, is entitled to compensation to be determined, in case of dispute, under Part 1 (determination of questions of disputed compensation) of the 1961 Act.

(5) Compensation is not payable under paragraph (4) to any person who is an undertaker to whom section 85 (sharing cost of necessary measures) of the 1991 Act applies in respect of measures of which the allowable costs are to be borne in accordance with that section.

Temporary use of land for carrying out the authorised development

24.—(1) The undertaker may, in connection with the carrying out of the authorised development—

- (a) enter on and take temporary possession of any of the Order land in respect of which no notice of entry has been served under section 11 (other than in connection with the acquisition of rights only) of the 1965 Act and no declaration has been made under section 4 of the 1981 Act;
- (b) remove any buildings, agricultural plant and apparatus, drainage, fences, debris and vegetation from that land;
- (c) construct temporary works, haul roads, security fencing, bridges, structures and buildings on that land;
- (d) use the land for the purposes of a working site with access to the working site in connection with the authorised development;
- (e) construct any works, on that land as are mentioned in Part 1 of Schedule 1 (authorised development); and
- (f) carry out mitigation works required pursuant to the requirements in Schedule 1.

(2) Not less than 14 days before entering on and taking temporary possession of land under this article the undertaker must serve notice of the intended entry on the owners and occupiers of the land.

(3) The undertaker must not remain in possession of any land under this article for longer than reasonably necessary and in any event must not, without the agreement of the owners of the land, remain in possession of any land under this article after the end of the period of one year beginning with the date of completion of the part of the authorised development for which temporary possession of the land was taken unless the undertaker has, before the end of that period, served a notice of entry under section 11 of the 1965 Act or made a declaration under section 4 of the 1981 Act in relation to that land.

(4) Unless the undertaker has served notice of entry under section 11 of the 1965 Act or made a declaration under section 4 of the 1981 Act or otherwise acquired the land or rights over land subject to temporary possession, the undertaker must before giving up possession of land of which temporary possession has been taken under this article, remove all temporary works and restore the land to the reasonable satisfaction of the owners of the land; but the undertaker is not required to—

- (a) replace any building, structure, drain or electric line removed under this article;
- (b) remove any drainage works installed by the undertaker under this article;
- (c) remove any new road surface or other improvements carried out under this article to any street specified in Schedule 2 (streets subject to street works); or
- (d) restore the land on which any works have been carried out under paragraph (1)(f) insofar as the works relate to mitigation works identified in the environmental statement or required pursuant to the requirements in Schedule 1.

(5) The undertaker must pay compensation to the owners and occupiers of land which temporary possession is taken under this article for any loss or damage arising from the exercise in relation to the land of the provisions of any power conferred by this article.

(6) Any dispute as to a person's entitlement to compensation under paragraph (5), or as to the amount of the compensation, must be determined under Part 1 (determination of questions of disputed compensation) of the 1961 Act.

(7) Nothing in this article affects any liability to pay compensation under section 152 (compensation in case where no right to claim in nuisance) of the 2008 Act or under any other

enactment in respect of loss or damage arising from the carrying out of the authorised development, other than loss or damage for which compensation is payable under paragraph (5).

(8) Where the undertaker takes possession of land under this article, the undertaker is not required to acquire the land or any interest in it.

(9) Section 13 (refusal to give possession to acquiring authority) of the 1965 Act applies to the temporary use of land pursuant to this article to the same extent as it applies to the compulsory acquisition of land under this Order by virtue of section 125 (application of compulsory acquisition provisions) of the 2008 Act.

Temporary use of land for maintaining authorised development

25.—(1) Subject to paragraph (2), at any time during the maintenance period relating to any part of the authorised development, the undertaker may—

- (a) enter on and take temporary possession of any land within the Order land if such possession is reasonably required for the purpose of maintaining the authorised development; and
- (b) construct such temporary works and buildings on the land as may be reasonably necessary for that purpose.

(2) Paragraph (1) does not authorise the undertaker to take temporary possession of—

- (a) any house or garden belonging to a house; or
- (b) any building (other than a house) if it is for the time being occupied.

(3) Not less than 28 days before entering on and taking temporary possession of land under this article the undertaker must serve notice of the intended entry on the owners and occupiers of the land.

(4) The undertaker may only remain in possession of land under this article for so long as may be reasonably necessary to carry out the maintenance of the part of the authorised development for which possession of the land was taken.

(5) Before giving up possession of land of which temporary possession has been taken under this article, the undertaker must remove all temporary works and restore the land to the reasonable satisfaction of the owners of the land.

(6) The undertaker must pay compensation to the owners and occupiers of land of which temporary possession is taken under this article for any loss or damage arising from the exercise in relation to the land of the provisions of this article.

(7) Any dispute as to a person's entitlement to compensation under paragraph (6), or as to the amount of the compensation, must be determined under Part 1 of the 1961 Act.

(8) Nothing in this article affects any liability to pay compensation under section 152 of the 2008 Act (compensation in case where no right to claim in nuisance) or under any other enactment in respect of loss or damage arising from the maintenance of the authorised development, other than loss or damage for which compensation is payable under paragraph (6).

(9) Where the undertaker takes possession of land under this article, the undertaker is not required to acquire the land or any interest in it.

(10) Section 13 (refusal to give possession to acquiring authority) of the 1965 Act applies to the temporary use of land pursuant to this article to the same extent as it applies to the compulsory acquisition of land under this Order by virtue of section 125 (application of compulsory acquisition provisions) of the 2008 Act.

(11) In this article “the maintenance period” means the period of 5 years beginning with the date on which a phase of the authorised development first exports electricity to the national electricity transmission network.

Statutory undertakers

26. Subject to the provisions of Schedule 7 (protective provisions) the undertaker may—

- (a) acquire compulsorily, or acquire new rights or impose restrictive covenants over, the land belonging to statutory undertakers shown on the land plan within the Order land; and
- (b) extinguish the rights of, remove, relocate the rights of or reposition the apparatus belonging to statutory undertakers over or within the Order land.

Recovery of costs of new connections

27.—(1) Where any apparatus of a public utility undertaker or of a public communications provider is removed under article 26 (statutory undertakers) any person who is the owner or occupier of premises to which a supply was given from that apparatus is entitled to recover from the undertaker compensation in respect of expenditure reasonably incurred by that person, in consequence of the removal, for the purpose of effecting a connection between the premises and any other apparatus from which a supply is given.

(2) Paragraph (1) does not apply in the case of the removal of a public sewer but where such a sewer is removed under article 26 (statutory undertakers), any person who is—

- (a) the owner or occupier of premises the drains of which communicated with that sewer; or
- (b) the owner of a private sewer which communicated with that sewer,

is entitled to recover from the undertaker compensation in respect of expenditure reasonably incurred by that person, in consequence of the removal, for the purpose of making the drain or sewer belonging to that person communicate with any other public sewer or with a private sewerage disposal plant.

(3) This article does not have effect in relation to apparatus to which Part 3 (street works in England and Wales) of the 1991 Act applies.

(4) In this paragraph—

“public communications provider” has the same meaning as in section 151(1) (interpretation of Chapter 1) of the Communications Act 2003(a); and

“public utility undertaker” has the same meaning as in the 1980 Act.

PART 6 OPERATIONS

Operation of generating stations

28.—(1) The undertaker is hereby authorised to operate the generating stations comprised in the authorised development.

(2) This article does not relieve the undertaker of any requirement to obtain any permit or licence under any other legislation that may be required from time to time to authorise the operation of an electricity generating station.

Deemed marine licence under the 2009 Act

29. The deemed marine licence set out in Schedule 8 (deemed marine licence under the 2009 Act), is deemed to be granted to the undertaker under Part 4 (marine licensing) of the 2009 Act for the licensed marine activities set out in Part 1, and subject to the conditions set out in Part 2 of that Schedule.

(a) 2003 c.21

PART 7

MISCELLANEOUS AND GENERAL

Application of landlord and tenant law

30.—(1) This article applies to—

- (a) any agreement for leasing to any person the whole or any part of the authorised development or the right to operate the same; and
- (b) any agreement entered into by the undertaker with any person for the construction, maintenance, use or operation of the authorised development, or any part of it,

so far as any such agreement relates to the terms on which any land which is the subject of a lease granted by or under that agreement is to be provided for that person's use.

(2) No enactment or rule of law regulating the rights and obligations of landlords and tenants may prejudice the operation of any agreement to which this article applies.

(3) Accordingly, no such enactment or rule of law to which paragraph (2) applies in relation to the rights and obligations of the parties to any lease granted by or under any such agreement so as to—

- (a) exclude or in any respect modify any of the rights and obligations of those parties under the terms of the lease, whether with respect to the termination of the tenancy or any other matter;
- (b) confer or impose on any such party any right or obligation arising out of or connected with anything done or omitted on or in relation to land which is the subject of the lease, in addition to any such right or obligation provided for by the terms of the lease; or
- (c) restrict the enforcement (whether by action for damages or otherwise) by any party to the lease of any obligation of any other party under the lease.

Operational land for purposes of the 1990 Act

31. Development consent granted by this Order is treated as specific planning permission for the purposes of section 264(3)(a) (cases in which land is to be treated as operational land for the purposes of that Act) of the 1990 Act.

Felling or lopping of trees

32.—(1) The undertaker may fell or lop any tree or shrub near any part of the authorised development, or cut back its roots, if it reasonably believes it to be necessary to do so to prevent the tree or shrub from obstructing or interfering with the construction, maintenance or operation of the authorised development or any apparatus used in connection with the authorised development.

(2) In carrying out any activity authorised by paragraph (1), the undertaker must not do any unnecessary damage to any tree or shrub and must pay compensation to any person for any loss or damage arising from such activity.

(3) Any dispute as to a person's entitlement to compensation under paragraph (2), or as to the amount of compensation, must be determined under Part 1 (determination of questions of disputed compensation) of the 1961 Act.

Trees subject to tree preservation orders

33.—(1) The undertaker may fell or lop any tree within or overhanging land within the Order limits subject to a tree preservation order or cut back its roots, if it reasonably believes it to be necessary to do so in order to prevent the tree from obstructing or interfering with the construction, maintenance or operation of the authorised development or any apparatus used in connection with the authorised development.

(2) In carrying out any activity authorised by paragraph (1)—

- (a) the undertaker must do no unnecessary damage to any tree and must pay compensation to any person for any loss or damage arising from such activity; and
- (b) the duty contained in section 206(1) (replacement of trees) of the 1990 Act does not apply.

(3) The authority given by paragraph (1) constitutes a deemed consent under the relevant tree preservation order.

(4) Any dispute as to a person's entitlement to compensation under paragraph (2), or as to the amount of compensation, will be determined under Part 1 of the 1961 Act.

Certification of plans and documents, etc.

34.—(1) The undertaker must, as soon as practicable after the making of this Order, submit to the Secretary of State copies of—

- (a) the book of reference;
- (b) the Crown land plan;
- (c) the environmental statement;
- (d) the land plans;
- (e) the location, order limits and grid coordinates plans;
- (f) the outline battery safety management plan;
- (g) the outline construction environmental management plan;
- (h) the outline decommissioning and restoration plan;
- (i) the outline design principles;
- (j) the outline landscape and biodiversity management plan;
- (k) the outline special protection area construction noise management plan;
- (l) outline skills, supply chain and employment plan;
- (m) the outline written scheme of investigation;
- (n) the rights of way plan;
- (o) the special category land plan – open space;
- (p) the statutory / non-statutory nature conservation designations plan;
- (q) the statutory / non-statutory historic environment designations plan;
- (r) the streets and access plan;
- (s) the water bodies in a river basin management plan, plan; and
- (t) the works plan;

for certification that they are true copies of those plans and documents.

(2) A plan or document so certified is admissible in any proceedings as evidence of the contents of the document of which it is a copy.

(3) Where a plan or document certified under paragraph (1)—

- (a) refers to a provision of this Order (including any specified requirement) when it was in draft form; and
- (b) identifies that provision by number, or combination of numbers and letters, which is different from the number, or combination of numbers and letters by which the corresponding provision of this Order is identified in the Order as made,

the reference in the plan or document concerned must be construed for the purposes of this Order as referring to the provision (if any) corresponding to that provision in the Order as made.

Arbitration

35.—(1) Any difference under any provision of this Order, unless otherwise provided for, is to be referred to and settled in arbitration in accordance with the rules set out in Schedule 9 (arbitration rules) of this Order, by a single arbitrator to be agreed upon by the parties, within 14 days of receipt of the notice of arbitration, or if the parties fail to agree within the time period stipulated, to be appointed on application of either party (after giving written notice to the other) by the Secretary of State.

(2) Should the Secretary of State fail to make an appointment under paragraph (1) within 14 days of a referral, the referring party may refer to the Centre for Effective Dispute Resolution for the appointment of an arbitrator.

Requirements, appeals, etc.

36.—(1) Where an application is made to, or a request is made of the relevant planning authority or any other relevant person for any agreement or approval required or contemplated by any of the provisions of the Order, such agreement or approval must, if given, be given in writing and must not be unreasonably withheld or delayed.

(2) Part 3 (procedure for discharge of requirements) of Schedule 1 has effect in relation to all agreements or approvals granted, refused or withheld in relation to requirements.

Crown rights

37.—(1) Nothing in this Order affects prejudicially any estate, right, power, privilege, authority or exemption of the Crown and in particular, nothing in this Order authorises the undertaker or any licensee to take possession of, use, enter upon or in any manner interfere with any land or rights of any description (including any portion of the shore or bed of the sea or any river, channel, creek, bay or estuary)—

- (a) belonging to Her Majesty in right of the Crown and forming part of the Crown Estate without the consent in writing of the Crown Estate Commissioners;
- (b) belonging to Her Majesty in right of the Crown and not forming part of the Crown Estate without the consent in writing of the government department having the management of that land; or
- (c) belonging to a government department or held in trust for Her Majesty for the purposes of a government department without the consent in writing of that government department.

(2) Paragraph (1) does not apply to the exercise of any right under this Order for the compulsory acquisition of an interest in any Crown land (as defined in the 2008 Act) which is for the time being held otherwise than by or on behalf of the Crown.

(3) A consent under paragraph (1) may be given unconditionally or subject to terms and conditions; and is deemed to have been given in writing where it is sent electronically.

Protective provisions

38. Schedule 7 (protective provisions) has effect.

Funding

39.—(1) The undertaker must not exercise the powers conferred by the provisions referred to in paragraph (2) in relation to any land unless it has first put in place either—

- (a) a guarantee and the amount of that guarantee approved by the Secretary of State in respect of the liabilities of the undertaker to pay compensation under this Order in respect of the exercise of the relevant power in relation to that land; or
- (b) an alternative form of security and the amount of that security for that purpose approved by the Secretary of State in respect of the liabilities of the undertaker to pay compensation under this Order in respect of the exercise of the relevant power in relation to that land.

(2) The provisions are—

- (a) article 16 (compulsory acquisition of land);
- (b) article 18 (compulsory acquisition of rights);
- (c) article 19 (private rights);
- (d) article 21 (acquisition of subsoil only);
- (e) article 23 (rights under or over streets);
- (f) article 24 (temporary use of land for carrying out the authorised development);
- (g) article 25 (temporary use of land for maintaining the authorised development); and
- (h) article 26 (statutory undertakers).

(3) A guarantee or alternative form of security given in respect of any liability of the undertaker to pay compensation under this Order is to be treated as enforceable against the guarantor or person providing the alternative form of security by any person to whom such compensation is payable and must be in such a form as to be capable of enforcement by such a person.

(4) Nothing in this article requires a guarantee or alternative form of security to be in place for more than 15 years after the date on which the relevant power is exercised.

Signed by Authority of the Secretary of State for Business, Energy and Industrial Strategy

| | |
|---------|--|
| | <i>Name</i> |
| Address | Head of [] |
| Date | Department of Business, Energy and Industrial Strategy |

SCHEDULE 1

Article 3

AUTHORISED DEVELOPMENT

PART 1

AUTHORISED DEVELOPMENT

1. In the Districts of Swale and Canterbury in the County of Kent a nationally significant infrastructure project as defined in sections 14 and 15 of the 2008 Act and associated development under section 115(1)(b) of the 2008 Act.

The nationally significant infrastructure project comprises up to two generating stations with a combined gross electrical output capacity of over 50 megawatts comprising all or any of the work numbers in this Schedule or any part of any work number in this Schedule—

Work No.1— a ground mounted solar photovoltaic generating station with a gross electrical output capacity of over 50 megawatts comprising—

- (a) solar modules;
- (b) inverters;
- (c) transformers; and
- (d) a network of cable circuits.

Work No.2— works comprising either—

- (a) an energy storage facility with a gross storage capacity of over 50 megawatts comprising—
 - (i) energy storage;
 - (ii) transformers;
 - (iii) switch gear and ancillary equipment;
 - (iv) a network of cable circuits;
 - (v) cables connecting to Work Nos. 1 and 3; and
 - (vi) a flood protection bund; or
- (b) an extension of the ground mounted solar photovoltaic generating station in Work No.1 and comprising—
 - (i) solar modules;
 - (ii) inverters;
 - (iii) transformers;
 - (iv) electrical underground cables connecting to Work Nos. 1 and 3;
 - (v) a network of cable circuits; and
 - (vi) a flood protection bund,

and associated development within the meaning of section 115(2) of the 2008 Act comprising—

Work No.3— a substation with works comprising—

- (a) a network of cable circuits;
- (b) electrical underground cables connecting to Work Nos 1 and 2, and the existing substation;
- (c) construction compounds; and
- (d) a flood protection bund.

Work No.4— works comprising—

- (a) a network of cable circuits;
- (b) construction compounds;
- (c) landscaping;
- (d) earthworks;
- (e) drainage; and
- (f) undergrounding of existing overhead line.

Work No.5— works to lay cable systems connecting Work No. 3 and the existing substation and works to create and maintain means of access connecting to the existing access road in Work No. 7;

Work No.6— works to create and maintain a means of access connecting Work Nos 1, 2 and 3 with the existing access road in Work No. 7;

Work No.7— works to alter and maintain the existing access road;

Work No.8— works to create and maintain a habitat management area, comprising—

- (a) earth works;
- (b) means of access; and
- (c) drainage;

Work No.9— works to maintain the existing flood defence, comprising—

- (a) inspection;
- (b) investigation (above MHWS, inclusive of trial pitting);
- (c) replacement of expansion joint material;
- (d) concrete repair (to a standard specified in BS EN 1504);
- (e) replacement of concrete toe beam;
- (f) vegetation management (including grass cutting and removal of larger vegetation);
- (g) replacement of loose and missing block work;
- (h) repair of voids;
- (i) fencing repair and replacement;
- (j) servicing outfalls;
- (k) cleaning outfall ancillary structures;
- (l) topping up of embankment crest levels at localised low spots;
- (m) vermin control;
- (n) repairs of rutting in crest;
- (o) repointing of jointed structures;
- (p) replacing modular blocks;
- (q) replacement of toe armour as required;
- (r) reinstatement of timber toe piles;
- (s) timber groyne plank replacement;
- (t) replacement of bolts on groyne;
- (u) placement of timber rubbing boards on groyne;
- (v) localised movements of beach material;
- (w) cleaning/dredging of drainage ditch channels;
- (x) replacement of pitching where present;
- (y) replacement of access structures;

- (z) painting; and
- (aa) any other activities required to be undertaken which—
 - (i) use the same materials as those on the existing flood defence;
 - (ii) do not alter the plan form or cross section of the existing flood defence;
 - (iii) do not provide an overall increase or reduction in flood level; and
 - (iv) do not require excavations of beach material deeper than 1.5 metres.

In connection with such Work Nos. 1 to 9 and to the extent that they do not otherwise form part of any such work, further associated development comprising such other works as may be necessary or expedient for the purposes of or in connection with the relevant part of the authorised development and which fall within the scope of the work assessed by the environmental statement, including—

- (a) works for the provision of fencing and security measures such as CCTV and lighting;
- (b) laying down of internal access tracks;
- (c) ramps, means of access and footpaths;
- (d) bunds, embankments, and swales;
- (e) boundary treatments, including means of enclosure;
- (f) laying out and surfacing of permissive paths, including the laying and construction of drainage infrastructure, signage and information boards;
- (g) habitat creation and management, including earthworks, landscaping, means of enclosure, and the laying and construction of drainage infrastructure;
- (h) jointing bays, cable ducts, cable protection, joint protection, manholes, kiosks, marker posts, underground cable marker, tiles and tape, and lighting and other works associated with cable laying;
- (i) works for the provision of apparatus including cabling, water supply works, foul drainage provision, surface water management systems and culverting;
- (j) works to alter the position of apparatus, including mains, sewers, drains and cables;
- (k) works to alter the course of, or otherwise interfere with, non-navigable rivers, streams or watercourses;
- (l) landscaping and other works to mitigate any adverse effects of the construction, maintenance or operation of the authorised development;
- (m) works for the benefit or protection of land affected by the authorised development; and
- (n) working sites in connection with the construction of the authorised development, construction lay down areas and compounds, storage compounds and their restoration.

2. The grid coordinates for that part of the authorised development which is seaward of MHWS are specified below—

| <i>Point ID</i> | <i>Latitude (DMS)</i> | <i>Longitude (DMS)</i> | <i>Point ID</i> | <i>Latitude (DMS)</i> | <i>Longitude (DMS)</i> |
|-----------------|-----------------------|------------------------|-----------------|-----------------------|------------------------|
| 1 | 51° 19' 56.946" N | 0° 54' 46.089" E | 100 | 51° 20' 32.408" N | 0° 54' 7.763" E |
| 2 | 51° 19' 58.535" N | 0° 54' 45.298" E | 101 | 51° 20' 33.143" N | 0° 54' 9.545" E |
| 3 | 51° 19' 58.708" N | 0° 54' 45.201" E | 102 | 51° 20' 34.285" N | 0° 54' 13.532" E |
| 4 | 51° 19' 59.027" N | 0° 54' 45.080" E | 103 | 51° 20' 35.087" N | 0° 54' 17.689" E |
| 5 | 51° 19' 59.384" N | 0° 54' 44.724" E | 104 | 51° 20' 35.317" N | 0° 54' 21.662" E |
| 6 | 51° 19' 59.960" N | 0° 54' 44.350" E | 105 | 51° 20' 37.215" N | 0° 54' 36.902" E |
| 7 | 51° 20' 1.300" N | 0° 54' 43.858" E | 106 | 51° 20' 37.791" N | 0° 54' 38.342" E |
| 8 | 51° 20' 2.911" N | 0° 54' 42.665" E | 107 | 51° 20' 37.114" N | 0° 54' 46.675" E |
| 9 | 51° 20' 3.116" N | 0° 54' 42.384" E | 108 | 51° 20' 37.181" N | 0° 54' 46.705" E |
| 10 | 51° 20' 4.788" N | 0° 54' 40.819" E | 109 | 51° 20' 37.035" N | 0° 54' 49.041" E |

| | | | | | |
|----|-------------------|------------------|-----|-------------------|------------------|
| 11 | 51° 20' 4.959" N | 0° 54' 40.563" E | 110 | 51° 20' 36.955" N | 0° 54' 49.652" E |
| 12 | 51° 20' 5.438" N | 0° 54' 40.227" E | 111 | 51° 20' 36.954" N | 0° 54' 49.874" E |
| 13 | 51° 20' 6.231" N | 0° 54' 38.746" E | 112 | 51° 20' 36.983" N | 0° 54' 50.130" E |
| 14 | 51° 20' 6.637" N | 0° 54' 38.090" E | 113 | 51° 20' 36.985" N | 0° 54' 50.419" E |
| 15 | 51° 20' 7.311" N | 0° 54' 36.551" E | 114 | 51° 20' 36.920" N | 0° 54' 50.652" E |
| 16 | 51° 20' 7.817" N | 0° 54' 35.012" E | 115 | 51° 20' 37.006" N | 0° 54' 51.158" E |
| 17 | 51° 20' 8.559" N | 0° 54' 30.512" E | 116 | 51° 20' 37.215" N | 0° 54' 50.375" E |
| 18 | 51° 20' 8.713" N | 0° 54' 28.690" E | 117 | 51° 20' 37.673" N | 0° 54' 46.063" E |
| 19 | 51° 20' 8.886" N | 0° 54' 27.093" E | 118 | 51° 20' 38.109" N | 0° 54' 39.463" E |
| 20 | 51° 20' 8.229" N | 0° 54' 29.798" E | 119 | 51° 20' 36.284" N | 0° 54' 26.251" E |
| 21 | 51° 20' 7.773" N | 0° 54' 32.964" E | 120 | 51° 20' 35.445" N | 0° 54' 16.667" E |
| 22 | 51° 20' 6.916" N | 0° 54' 36.190" E | 121 | 51° 20' 34.876" N | 0° 54' 13.691" E |
| 23 | 51° 20' 5.271" N | 0° 54' 39.948" E | 122 | 51° 20' 33.400" N | 0° 54' 8.742" E |
| 24 | 51° 20' 1.514" N | 0° 54' 43.309" E | 123 | 51° 20' 32.885" N | 0° 54' 7.478" E |
| 25 | 51° 19' 59.852" N | 0° 54' 43.782" E | 124 | 51° 20' 32.714" N | 0° 54' 5.934" E |
| 26 | 51° 20' 11.941" N | 0° 54' 13.217" E | 125 | 51° 20' 32.081" N | 0° 54' 3.003" E |
| 27 | 51° 20' 11.877" N | 0° 54' 12.095" E | 126 | 51° 20' 36.869" N | 0° 54' 51.672" E |
| 28 | 51° 20' 11.663" N | 0° 54' 10.398" E | 127 | 51° 20' 36.819" N | 0° 54' 51.640" E |
| 29 | 51° 20' 11.436" N | 0° 54' 9.385" E | 128 | 51° 20' 36.762" N | 0° 54' 51.642" E |
| 30 | 51° 20' 10.399" N | 0° 54' 6.406" E | 129 | 51° 20' 36.711" N | 0° 54' 51.724" E |
| 31 | 51° 20' 10.522" N | 0° 54' 7.338" E | 130 | 51° 20' 36.674" N | 0° 54' 51.969" E |
| 32 | 51° 20' 10.085" N | 0° 53' 46.895" E | 131 | 51° 20' 36.662" N | 0° 54' 52.243" E |
| 33 | 51° 20' 10.324" N | 0° 53' 47.052" E | 132 | 51° 20' 36.643" N | 0° 54' 52.308" E |
| 34 | 51° 20' 10.497" N | 0° 53' 47.265" E | 133 | 51° 20' 36.557" N | 0° 54' 52.486" E |
| 35 | 51° 20' 10.555" N | 0° 53' 47.377" E | 134 | 51° 20' 36.597" N | 0° 54' 52.469" E |
| 36 | 51° 20' 10.609" N | 0° 53' 47.678" E | 135 | 51° 20' 36.651" N | 0° 54' 52.486" E |
| 37 | 51° 20' 10.685" N | 0° 53' 56.589" E | 136 | 51° 20' 42.418" N | 0° 55' 36.744" E |
| 38 | 51° 20' 10.577" N | 0° 53' 57.633" E | 137 | 51° 20' 42.431" N | 0° 55' 37.288" E |
| 39 | 51° 20' 10.677" N | 0° 53' 57.274" E | 138 | 51° 20' 42.700" N | 0° 55' 40.210" E |
| 40 | 51° 20' 10.741" N | 0° 53' 56.919" E | 139 | 51° 20' 42.775" N | 0° 55' 40.607" E |
| 41 | 51° 20' 10.759" N | 0° 53' 56.703" E | 140 | 51° 20' 42.916" N | 0° 55' 40.911" E |
| 42 | 51° 20' 10.691" N | 0° 53' 47.644" E | 141 | 51° 20' 42.913" N | 0° 55' 41.691" E |
| 43 | 51° 20' 10.658" N | 0° 53' 47.286" E | 142 | 51° 20' 43.090" N | 0° 55' 42.369" E |
| 44 | 51° 20' 10.631" N | 0° 53' 47.191" E | 143 | 51° 20' 43.208" N | 0° 55' 42.254" E |
| 45 | 51° 20' 10.417" N | 0° 53' 46.970" E | 144 | 51° 20' 43.241" N | 0° 55' 43.046" E |
| 46 | 51° 20' 10.380" N | 0° 53' 46.880" E | 145 | 51° 20' 43.362" N | 0° 55' 43.772" E |
| 47 | 51° 20' 10.348" N | 0° 53' 46.718" E | 146 | 51° 20' 43.555" N | 0° 55' 43.598" E |
| 48 | 51° 20' 10.380" N | 0° 53' 46.503" E | 147 | 51° 20' 43.523" N | 0° 55' 44.092" E |
| 49 | 51° 20' 10.447" N | 0° 53' 46.302" E | 148 | 51° 20' 43.570" N | 0° 55' 44.669" E |
| 50 | 51° 20' 27.907" N | 0° 53' 46.744" E | 149 | 51° 20' 43.671" N | 0° 55' 45.270" E |
| 51 | 51° 20' 27.862" N | 0° 53' 47.043" E | 150 | 51° 20' 43.799" N | 0° 55' 45.070" E |
| 52 | 51° 20' 27.876" N | 0° 53' 47.230" E | 151 | 51° 20' 43.780" N | 0° 55' 45.567" E |
| 53 | 51° 20' 27.830" N | 0° 53' 47.672" E | 152 | 51° 20' 43.948" N | 0° 55' 46.756" E |
| 54 | 51° 20' 27.699" N | 0° 53' 48.253" E | 153 | 51° 20' 44.306" N | 0° 55' 48.368" E |
| 55 | 51° 20' 27.585" N | 0° 53' 48.411" E | 154 | 51° 20' 44.687" N | 0° 55' 49.791" E |
| 56 | 51° 20' 27.555" N | 0° 53' 48.435" E | 155 | 51° 20' 45.757" N | 0° 55' 54.594" E |
| 57 | 51° 20' 27.538" N | 0° 53' 48.625" E | 156 | 51° 20' 47.241" N | 0° 56' 2.207" E |
| 58 | 51° 20' 27.517" N | 0° 53' 48.660" E | 157 | 51° 20' 47.983" N | 0° 56' 6.651" E |

| | | | | | |
|----|-------------------|------------------|-----|-------------------|------------------|
| 59 | 51° 20' 27.406" N | 0° 53' 48.710" E | 158 | 51° 20' 48.152" N | 0° 56' 6.491" E |
| 60 | 51° 20' 27.376" N | 0° 53' 48.744" E | 159 | 51° 20' 48.092" N | 0° 56' 6.958" E |
| 61 | 51° 20' 27.358" N | 0° 53' 48.805" E | 160 | 51° 20' 48.096" N | 0° 56' 7.304" E |
| 62 | 51° 20' 27.357" N | 0° 53' 48.852" E | 161 | 51° 20' 48.226" N | 0° 56' 7.918" E |
| 63 | 51° 20' 27.320" N | 0° 53' 49.159" E | 162 | 51° 20' 48.436" N | 0° 56' 7.698" E |
| 64 | 51° 20' 27.275" N | 0° 53' 49.275" E | 163 | 51° 20' 48.394" N | 0° 56' 8.208" E |
| 65 | 51° 20' 27.252" N | 0° 53' 49.310" E | 164 | 51° 20' 48.416" N | 0° 56' 8.607" E |
| 66 | 51° 20' 27.112" N | 0° 53' 49.343" E | 165 | 51° 20' 48.474" N | 0° 56' 8.816" E |
| 67 | 51° 20' 27.084" N | 0° 53' 49.434" E | 166 | 51° 20' 48.520" N | 0° 56' 8.981" E |
| 68 | 51° 20' 27.059" N | 0° 53' 49.665" E | 167 | 51° 20' 48.530" N | 0° 56' 9.101" E |
| 69 | 51° 20' 27.036" N | 0° 53' 49.798" E | 168 | 51° 20' 48.516" N | 0° 56' 9.227" E |
| 70 | 51° 20' 26.925" N | 0° 53' 50.097" E | 169 | 51° 20' 48.514" N | 0° 56' 9.358" E |
| 71 | 51° 20' 26.949" N | 0° 53' 50.133" E | 170 | 51° 20' 48.592" N | 0° 56' 9.802" E |
| 72 | 51° 20' 27.049" N | 0° 53' 49.908" E | 171 | 51° 20' 48.676" N | 0° 56' 10.128" E |
| 73 | 51° 20' 27.113" N | 0° 53' 49.705" E | 172 | 51° 20' 48.616" N | 0° 56' 7.869" E |
| 74 | 51° 20' 27.164" N | 0° 53' 49.465" E | 173 | 51° 20' 48.857" N | 0° 56' 14.026" E |
| 75 | 51° 20' 27.246" N | 0° 53' 49.429" E | 174 | 51° 20' 48.852" N | 0° 56' 14.100" E |
| 76 | 51° 20' 27.272" N | 0° 53' 49.410" E | 175 | 51° 20' 48.844" N | 0° 56' 14.168" E |
| 77 | 51° 20' 27.326" N | 0° 53' 49.330" E | 176 | 51° 20' 48.807" N | 0° 56' 14.326" E |
| 78 | 51° 20' 27.347" N | 0° 53' 49.270" E | 177 | 51° 20' 48.722" N | 0° 56' 14.640" E |
| 79 | 51° 20' 27.374" N | 0° 53' 49.080" E | 178 | 51° 20' 48.645" N | 0° 56' 15.364" E |
| 80 | 51° 20' 27.403" N | 0° 53' 48.953" E | 179 | 51° 20' 48.916" N | 0° 56' 17.077" E |
| 81 | 51° 20' 27.459" N | 0° 53' 48.796" E | 180 | 51° 20' 44.526" N | 0° 56' 52.481" E |
| 82 | 51° 20' 27.534" N | 0° 53' 48.775" E | 181 | 51° 20' 44.523" N | 0° 56' 53.111" E |
| 83 | 51° 20' 27.577" N | 0° 53' 48.731" E | 182 | 51° 20' 44.613" N | 0° 56' 53.520" E |
| 84 | 51° 20' 27.605" N | 0° 53' 48.666" E | 183 | 51° 20' 44.607" N | 0° 56' 53.654" E |
| 85 | 51° 20' 27.622" N | 0° 53' 48.491" E | 184 | 51° 20' 44.472" N | 0° 56' 54.152" E |
| 86 | 51° 20' 27.695" N | 0° 53' 48.408" E | 185 | 51° 20' 44.365" N | 0° 56' 54.631" E |
| 87 | 51° 20' 27.763" N | 0° 53' 48.293" E | 186 | 51° 20' 44.337" N | 0° 56' 54.961" E |
| 88 | 51° 20' 27.942" N | 0° 53' 47.338" E | 187 | 51° 20' 44.341" N | 0° 56' 55.338" E |
| 89 | 51° 20' 27.948" N | 0° 53' 47.235" E | 188 | 51° 20' 44.188" N | 0° 56' 56.399" E |
| 90 | 51° 20' 27.910" N | 0° 53' 47.165" E | 189 | 51° 20' 44.193" N | 0° 56' 56.709" E |
| 91 | 51° 20' 27.920" N | 0° 53' 47.052" E | 190 | 51° 20' 44.268" N | 0° 56' 57.174" E |
| 92 | 51° 20' 27.939" N | 0° 53' 46.941" E | 191 | 51° 20' 49.033" N | 0° 56' 20.247" E |
| 93 | 51° 20' 27.963" N | 0° 53' 46.853" E | 192 | 51° 20' 48.835" N | 0° 56' 14.262" E |
| 94 | 51° 20' 27.997" N | 0° 53' 46.798" E | 193 | 51° 20' 48.854" N | 0° 56' 14.137" E |
| 95 | 51° 20' 30.414" N | 0° 53' 56.932" E | 194 | 51° 20' 48.859" N | 0° 56' 14.060" E |
| 96 | 51° 20' 30.486" N | 0° 53' 58.149" E | 195 | 51° 20' 47.432" N | 0° 56' 30.037" E |
| 97 | 51° 20' 30.389" N | 0° 53' 58.557" E | 196 | 51° 20' 47.356" N | 0° 56' 30.457" E |
| 98 | 51° 20' 31.727" N | 0° 54' 3.734" E | 197 | 51° 20' 46.743" N | 0° 56' 35.249" E |
| 99 | 51° 20' 32.193" N | 0° 54' 5.976" E | 198 | 51° 20' 46.536" N | 0° 56' 37.296" E |

PART 2 REQUIREMENTS

Time limits

1. The authorised development must commence no later than the expiration of five years beginning with the date this Order comes into force.

Detailed design approval

2.—(1) No phase of the authorised development may commence until details of—

- (a) the layout;
- (b) scale;
- (c) proposed finished ground levels;
- (d) external appearance;
- (e) hard surfacing materials;
- (f) vehicular and pedestrian access, parking and circulation areas;
- (g) refuse or other storage units, signs and lighting;
- (h) drainage, water, power and communications cables and pipelines;
- (i) programme for landscaping works; and
- (j) fencing,

relating to that phase have been submitted to and approved in writing by the relevant planning authority.

(2) The details submitted must accord with—

- (a) the location, order limits and grid coordinates plan;
- (b) the works plan; and
- (c) the outline design principles, or such variation thereof as may be approved by the relevant planning authority pursuant to requirement 19.

(3) The authorised development must be carried out in accordance with the approved details.

Battery safety management

3.—(1) Work No. 2(a) must not commence until a Battery Safety Management Plan (“BSMP”) has been submitted to and approved by the relevant planning authority.

(2) The BSMP must prescribe measures to facilitate safety during the construction, operation and decommissioning of Work No.2(a) including the transportation of new, used and replacement battery cells both to and from the authorised development.

(3) The BSMP must accord with the outline battery safety management plan.

(4) The relevant planning authority must consult with the Health and Safety Executive and Kent Fire and Rescue Service before determining an application for approval of the BSMP.

(5) The BSMP must be implemented as approved.

Phases of authorised development

4.—(1) The authorised development may not be commenced until a written scheme setting out the phases of construction of the authorised development has been submitted to and approved by the relevant planning authority.

(2) The scheme must be implemented as approved.

Landscape and biodiversity management plan

5.—(1) No phase of the authorised development may commence until a written landscape and biodiversity management plan (which accords with the outline landscape and biodiversity management plan) has been submitted to and approved by the relevant planning authority in consultation with Natural England.

(2) The landscape and biodiversity management plan must be implemented as approved.

Implementation and maintenance of landscaping

6.—(1) All landscaping works must be carried out in accordance with the landscape and biodiversity management plan approved under requirement 5 (landscape and biodiversity management plan), and in accordance with the relevant recommendations of appropriate British Standards.

(2) Any tree or shrub planted as part of an approved landscaping management scheme that, within a period of five years after planting, is removed, dies or becomes, in the opinion of the relevant planning authority, seriously damaged or diseased must be replaced in the first available planting season with a specimen of the same species and size as that originally planted.

Public rights of way diversions

7.—(1) No phase of the authorised development may commence until a public rights of way management plan for any sections of public rights of way shown to be temporarily closed on the access and rights of way plans for that phase has been submitted to and approved by the relevant planning authority in consultation with the relevant highway authority.

(2) The plan must include details of—

- (a) measures to minimise the length of any sections of public rights of way to be temporarily closed; and
- (b) advance publicity and signage in respect of any sections of public rights of way to be temporarily closed.

(3) The plan must be implemented as approved unless otherwise agreed with the relevant planning authority in consultation with the highway authority.

Fencing and other means of enclosure

8.—(1) No phase of the authorised development may commence until written details of all proposed permanent and temporary fences, walls or other means of enclosure of the connection works for that phase have been submitted to and approved by the relevant planning authority as part of the detailed design approval required by requirement 2(1).

(2) For the purposes of requirement 8(1), “commence” includes any site preparation works.

(3) Any construction site must remain securely fenced in accordance with the approved details at all times during construction of the authorised development.

(4) Any temporary fencing must be removed on completion of the phase of construction of the authorised development for which it was used.

(5) Any approved permanent fencing must be completed before completion of the authorised development.

Surface and foul water drainage

9.—(1) No phase of the authorised development may commence until details of the surface and (if any) foul water drainage system (including means of pollution control) for that phase have been submitted to and approved by the relevant planning authority in consultation with Kent County Council as lead local flood authority and the Lower Medway Internal Drainage Board.

(2) The surface and foul water drainage system must be constructed in accordance with the approved details.

Archaeology

10.—(1) No phase of the authorised development may commence until a written scheme of archaeological investigation (which must accord with the outline written scheme of investigation) for that phase has been submitted to and approved by the relevant planning authority.

(2) For the purposes of requirement 10(1), “commence” includes any site preparation works.

(3) In the event that site investigation is required, the scheme must include details of the following—

- (a) an assessment of significance and research questions;
- (b) the programme and methodology of site investigation and recording;
- (c) the programme for post investigation assessment;
- (d) provision for analysis of the site investigation and recording;
- (e) provision for publication and dissemination of the analysis and records of the site investigation;
- (f) provision for archive deposition of the analysis and records of the site investigation; and
- (g) nomination of a competent person, persons or organisation to undertake the works set out within the written scheme of investigation.

(4) Any archaeological works or watching brief must be carried out in accordance with the approved scheme.

(5) In the event that site investigation is required, the site investigation and post investigation assessment must be completed in accordance with the programme set out in the written scheme of archaeological investigation and provision made for analysis, publication and dissemination of results and archive deposition.

Construction environmental management plan

11.—(1) No phase of the authorised development may commence until a construction environmental management plan (which must accord with the outline construction environmental management plan) for that phase has been submitted to and approved by the relevant planning authority, in consultation with the relevant highway authority and the Environment Agency.

(2) The construction environmental management plan must include the following documents relevant to the phase of the authorised development in respect of which it is submitted—

- (a) site waste management plan;
- (b) breeding bird protection plan;
- (c) new watercourse crossing inventory; and
- (d) upgraded watercourse crossing inventory.

(3) The construction environmental management plan must be implemented as approved.

Construction traffic management plan

12.—(1) No phase of the authorised development may commence until written details of a construction traffic management plan (which must accord with the outline construction traffic management plan) for that phase has been submitted to and approved by the relevant planning authority in consultation with the relevant highway authority.

(2) The construction traffic management plan must be implemented as approved.

Special protection area construction noise management plan

13.—(1) No phase of the authorised development may commence until written details of a special protection area construction noise management plan (which must accord with the outline special protection area construction noise plan) for that phase has been submitted to and approved by the relevant planning authority.

(2) The special protection area construction noise management plan must be implemented as approved.

Protected species

14.—(1) No phase of the authorised development may commence until final pre-construction survey work has been carried out for that phase to establish whether a protected species is present on any of the land affected, or likely to be affected, by the authorised development or in any of the trees to be lopped or felled as part of that stage of the connection works.

(2) For the purposes of requirement 14(1) “commence” includes any site preparation works.

(3) Where a protected species is shown to be present, the phase of the authorised development must not begin until, after consultation with Natural England and the relevant planning authority, a scheme of protection and mitigation measures has been submitted to and approved by the relevant planning authority.

(4) The authorised development must be carried out in accordance with the approved scheme.

(5) In this requirement, “protected species” refers to any species defined as a European Protected Species in regulations 42 (European protected species of animals) and 46 (European protected species of plants) of the Conservation of Habitats and Species Regulations 2017^(a) or any species to which Part I (wildlife) and Schedule 5 (animals which are protected) of the Wildlife and Countryside Act 1981^(b) applies.

Operational noise

15.—(1) No phase of the authorised development may commence until an operational noise assessment containing details of how the design of the authorised development has incorporated mitigation to ensure the operational noise rating levels as set out in the environmental statement are to be complied with for that phase has been submitted to and approved by the relevant local planning authority.

(2) The design as described in the operational noise assessment must be implemented as approved.

Local skills, supply chain and employment

16.—(1) No phase of the authorised development may commence until for that phase a skills, supply chain and employment plan in relation to the authorised development (which accords with the outline skills, supply chain and employment plan) has been submitted to and approved by the relevant planning authority.

(2) The skills, supply chain and employment plan must identify opportunities for individuals and businesses to access employment and supply chain opportunities associated with the construction, operation and maintenance of the authorised development, and the means for publicising such opportunities.

(3) The skills and employment plans must be implemented as approved.

(a) S.I. 2017/1012.

(b) 1981 c.69.

Decommissioning

17.—(1) Within 14 days of the date of final commissioning the undertaker must serve written notice on the relevant planning authority and the Environment Agency of the date of final commissioning.

(2) No later than the 35th anniversary of the date of final commissioning, the undertaker and Environment Agency must—

- (a) undertake a review of the progress made by the Environment Agency in respect of managed realignment of the existing flood defence, with particular regard to the timescales for achieving—
 - (i) all necessary consents and approvals;
 - (ii) all the land and/or rights over land; and
 - (iii) funding required for managed realignment of the existing flood defence; and
- (b) as soon as reasonably practicable following that review, submit a managed realignment programme to the relevant planning authority, which sets out the timescales for achieving the matters prescribed in sub-paragraphs (a)(i) to (iii) inclusively and the anticipated date by which the parts of the authorised development required for managed realignment of the existing flood defence must be decommissioned.

(3) If the Environment Agency is unable to satisfy the requirements of sub-paragraph (2) on or before the 35th anniversary of the date of final commissioning, the process set out in that sub-paragraph must be repeated every five years thereafter until the Environment Agency is able to submit a managed realignment programme to the relevant planning authority compliant with that sub-paragraph.

(4) The Environment Agency must consult, and have regard to any representations received from, the undertaker in respect of the managed realignment programme before it is submitted to the relevant planning authority and if the undertaker and Environment Agency cannot agree the timescales to be included in the managed realignment programme those timescales shall be determined pursuant to article 35 (arbitration).

(5) The Environment Agency may submit an application to the relevant planning authority for a decommissioning notice to be served on the undertaker in accordance with the managed realignment programme submitted pursuant to sub-paragraph (2) or (3) provided that it has first consulted, and had regard to, any submissions on the application made by the undertaker.

(6) The application made pursuant to sub-paragraph (5) must be accompanied by evidence that the Environment Agency has secured the matters prescribed in sub-paragraphs (2)(a)(i) to (iii) inclusively.

(7) Within eight weeks of receiving an application pursuant to sub-paragraph (5), or such other timescale as may be agreed in advance with the undertaker, the relevant planning authority must serve the decommissioning notice on the undertaker.

(8) Before serving the decommissioning notice, the relevant planning authority must—

- (a) be satisfied on the evidence before it that the Environment Agency has secured the matters prescribed in sub-paragraphs (2)(a)(i) to (iii) inclusively; and
- (b) consult, and have regard to, any submissions made by the undertaker.

(9) The decommissioning notice must—

- (a) give reasons for the relevant planning authority determining that the Environment Agency has secured the matters prescribed in sub-paragraphs (2)(a)(i) to (iii) inclusively;
- (b) include a plan detailing the extent of land within the Order limits required for managed realignment of the existing flood defence;
- (c) not be served—
 - (i) within a period of 40 years from the date of final commissioning, or until such later time as any appeal, arbitration or judicial review of any decommissioning notice served pursuant to this Requirement has been determined, and provide that the

authorised development may continue to generate and store electricity on a commercial basis until the later of those periods has been determined; and

- (ii) in respect of any land within the Order limits that is not required for managed realignment of the existing flood defence as shown on the plan required by (b) of this sub-paragraph.

(10) The undertaker must submit the decommissioning and restoration plan to the relevant planning authority for approval within 3 months of the earlier of—

- (a) all or part of the Order land ceasing to be used for the purposes of electricity generation or storage (either actively generating electricity or being available to generate electricity on a standby basis);
- (b) the date of the decommissioning notice served pursuant to sub-paragraph (7); or
- (c) such other timescale as may be approved by the relevant planning authority in writing.

(11) The decommissioning and restoration plan required by sub-paragraph (10) must—

- (a) accord with the outline decommissioning and restoration plan;
- (b) state the date by which the authorised development will be decommissioned; and
- (c) not require the undertaker to decommission the existing flood defence located within the Order limits.

(12) The decommissioning and restoration plan required must be implemented as approved.

(13) In this requirement the following definitions have effect—

“date of final commissioning” means the date on which the authorised development commences operation by generating electricity on a commercial basis but excluding the generation of electricity during commissioning and testing;

“decommissioning and restoration plan” means the decommissioning and restoration plan approved by the relevant planning authority pursuant to sub-paragraph (10) which sets out how the authorised development should be decommissioned and the specification to which the land should be restored having regard to the outline decommissioning and restoration plan and whether or not that land is required for managed realignment of the existing flood defence;

“decommissioning notice” means the notice to be served by the relevant planning authority on the undertaker pursuant to sub-paragraph (7) which confirms the requirement for the authorised development to be decommissioned having regard to the managed realignment programme and the matters prescribed in sub-paragraph (8);

“managed realignment of the existing flood defence” means the physical realignment of the existing flood defence located within the Order limits (that would require the removal of all or any part of Work No. 1, 2 and 3) as it exists at the date of this Order and as described in the Medway Estuary and Swale Strategy published on 10 September 2019 or as otherwise agreed between the undertaker and the Environment Agency, or determined by article 35 (arbitration); and

“managed realignment programme” means the managed realignment programme required to be submitted to the relevant planning authority by the Environment Agency pursuant to sub-paragraph (2) or (3) which sets out the timescales within which the Environment Agency reasonably expects the matters prescribed in sub-paragraphs (2)(a)(i) to (iii) inclusively to be secured such that managed realignment of the existing flood defence can be achieved.

Requirement for written approval

18. Where the approval, agreement or confirmation of the Secretary of State, relevant planning authority or another person is required under a requirement, that approval, agreement or confirmation must be given in writing.

Amendments to approved details

19.—(1) With respect to any requirement which requires the authorised development to be carried out in accordance with the details approved by the relevant planning authority or another person, the approved details must be carried out as approved unless an amendment or variation is previously agreed in writing by the relevant planning authority or that other person in accordance with sub-paragraph (2).

(2) Any amendments to or variations from the approved details must be in accordance with the principles and assessments set out in the environmental statement. Such agreement may only be given in relation to immaterial changes where it has been demonstrated to the satisfaction of the relevant planning authority or that other person that the subject matter of the agreement sought is unlikely to give rise to any materially new or materially different environmental effects from those assessed in the environmental statement.

(3) The approved details must be taken to include any amendments that may subsequently be approved in writing by the relevant planning authority or that other person.

Consultation

20. Where the relevant planning authority is required by this Order or other statute to consult with another person or body prior to discharging a requirement, the undertaker must consult with such person or body prior to making an application to discharge the requirement.

PART 3

PROCEDURE FOR DISCHARGE OF REQUIREMENTS

Interpretation

21. In this Part of this Schedule, “discharging authority” means—

- (a) any body responsible for giving any consent, agreement or approval required by a requirement included in Part 2 of this Schedule, or for giving any consent, agreement or approval further to any document referred to in any such requirement; or
- (b) the local authority in the exercise of its functions set out in sections 60 (control of noise on construction sites) and 61 (prior consent for work on construction sites) of the 1974 Act^(a).

Applications made under requirements

22.—(1) Where an application has been made to the discharging authority for any consent, agreement or approval required by a requirement contained in Part 2 of this Schedule, or for any consent, agreement or approval further to any document referred to in any such requirement, the discharging authority must give notice to the undertaker of its decision on the application within a period of eight weeks beginning with—

- (a) the day immediately following that on which the application is received by the discharging authority; or
- (b) where further information is requested under paragraph 23, the day immediately following that on which the further information has been supplied by the undertaker, or such longer period as may be agreed in writing by the undertaker and the discharging authority.

(a) 1974 c.40. Section 61 was amended by Schedule 7 to the Building Act 1984 (c.55), Schedule 15 to the Environmental Protection Act 1990 (c.43) and Schedule 24 to the Environment Act 1995 (c.25). There are other amendments to section 61 but none are relevant.

(2) In determining any application made to the discharging authority for any consent, agreement or approval required by a requirement contained in Part 2 of this Schedule, the discharging authority may—

- (a) give or refuse its consent, agreement or approval; or
- (b) give its consent, agreement or approval subject to reasonable conditions,

and where consent, agreement or approval is refused or granted subject to conditions the discharging authority must provide its reasons for that decision with the notice of the decision.

Further information regarding requirements

23.—(1) In relation to any application referred to in paragraph 22, the discharging authority may request such further information from the undertaker as it considers necessary to enable it to consider the application.

(2) If the discharging authority considers that further information is necessary and the requirement concerned contained in Part 2 of this Schedule does not specify that consultation with a consultee is required, the discharging authority must, within ten business days of receipt of the application, notify the undertaker in writing specifying the further information required.

(3) If the requirement concerned contained in Part 2 of this Schedule specifies that consultation with a consultee is required, the discharging authority must issue the application to the consultee within five business days of receipt of the application, and notify the undertaker in writing specifying any further information requested by the consultee within five business days of receipt of such a request.

(4) If the discharging authority does not give the notification within the period specified in subparagraph (2) or (3) it (and the consultee, as the case may be) is deemed to have sufficient information to consider the application and is not entitled to request further information without the prior agreement of the undertaker.

Appeals

24.—(1) Where a person (“the applicant”) makes an application to a discharging authority, the applicant may appeal to the Secretary of State in the event that—

- (a) the discharging authority refuses an application for any consent, agreement or approval required by—
 - (i) a requirement contained in Part 2 of this Schedule; or
 - (ii) a document referred to in any requirement contained in Part 2 of this Schedule;
- (b) the discharging authority does not determine such an application within the time period set out in paragraph 22(1), or grants it subject to conditions;
- (c) the discharging authority issues a notice further to sections 60 (control of noise on construction sites) or 61 (prior consent for work on construction sites) of the 1974 Act;
- (d) on receipt of a request for further information pursuant to paragraph 23 of this Part of this Schedule, the applicant considers that either the whole or part of the specified information requested by the discharging authority is not necessary for consideration of the application; or
- (e) on receipt of any further information requested, the discharging authority notifies the applicant that the information provided is inadequate and requests additional information which the applicant considers is not necessary for consideration of the application.

(2) The appeal process is as follows—

- (a) any appeal by the applicant must be made within 42 days of the date of the notice of the decision or determination, or (where no determination has been made) the expiry of the time period set out in paragraph 22(1), giving rise to the appeal referred to in subparagraph (1);

- (b) the applicant must submit the appeal documentation to the Secretary of State and must on the same day provide copies of the appeal documentation to the discharging authority and any consultee specified under the relevant requirement contained in Part 2 of this Schedule;
- (c) as soon as is practicable after receiving the appeal documentation, the Secretary of State must appoint a person to consider the appeal (“the appointed person”) and must notify the appeal parties of the identity of the appointed person and the address to which all correspondence for the attention of the appointed person should be sent;
- (d) the discharging authority and any consultee (if applicable) must submit their written representations together with any other representations to the appointed person in respect of the appeal within ten business days of the start date specified by the appointed person and must ensure that copies of their written representations and any other representations as sent to the appointed person are sent to each other and to the applicant on the day on which they are submitted to the appointed person;
- (e) the applicant must make any counter-submissions to the appointed person within ten business days of receipt of written representations pursuant to sub-paragraph (d) above; and
- (f) the appointed person must make a decision and notify it to the appeal parties, with reasons, as soon as reasonably practicable after the end of the ten day period for counter-submissions under sub-paragraph (e).

(3) The appointment of the appointed person pursuant to sub-paragraph (2)(c) may be undertaken by a person appointed by the Secretary of State for this purpose instead of by the Secretary of State.

(4) In the event that the appointed person considers that further information is necessary to enable the appointed person to consider the appeal the appointed person must as soon as practicable notify the appeal parties in writing specifying the further information required, the appeal party from whom the information is sought, and the date by which the information is to be submitted.

(5) Any further information required pursuant to sub-paragraph (4) must be provided by the party from whom the information is sought to the appointed person and to the other appeal parties by the date specified by the appointed person. The appointed person must notify the appeal parties of the revised timetable for the appeal on or before that day. The revised timetable for the appeal must require submission of written representations to the appointed person within ten business days of the date specified by the appointed person, but must otherwise be in accordance with the process and time limits set out in sub-paragraphs (2)(c) to (e).

(6) On an appeal under this paragraph, the appointed person may—

- (a) allow or dismiss the appeal; or
- (b) reverse or vary any part of the decision of the discharging authority (whether the appeal relates to that part of it or not),

and may deal with the application as if it had been made to the appointed person in the first instance.

(7) The appointed person may proceed to a decision on an appeal taking into account such written representations as have been sent within the relevant time limits and in the sole discretion of the appointed person such written representations as have been sent outside of the relevant time limits.

(8) The appointed person may proceed to a decision even though no written representations have been made within the relevant time limits, if it appears to the appointed person that there is sufficient material to enable a decision to be made on the merits of the case.

(9) The decision of the appointed person on an appeal is final and binding on the parties, and a court may entertain proceedings for questioning the decision only if the proceedings are brought by a claim for a judicial review.

(10) If an approval is given by the appointed person pursuant to this Part of this Schedule, it is deemed to be an approval for the purpose of Part 2 of this Schedule as if it had been given by the discharging authority. The discharging authority may confirm any determination given by the appointed person in identical form in writing, but a failure to give such confirmation (or a failure to give it in identical form) is not to be taken to affect or invalidate the effect of the appointed person's determination.

(11) Save where a direction is given pursuant to sub-paragraph (12) requiring the costs of the appointed person to be paid by the discharging authority, the reasonable costs of the appointed person are to be met by the applicant.

(12) On application by the discharging authority or the applicant, the appointed person may give directions as to the costs of the appeal and as to the parties by whom the costs of the appeal are to be paid. In considering whether to make any such direction and the terms on which it is to be made, the appointed person must have regard to relevant guidance on the Planning Practice Guidance website or any official circular or guidance which may from time to time replace it.

SCHEDULE 2

Article 8

STREETS SUBJECT TO STREET WORKS

| <i>(1)</i> <i>Area</i> | <i>(2)</i> <i>Street subject to street works</i> |
|---------------------------|--|
| Swale Borough | A farm track between the two points marked E and a point marked G and coloured yellow on figure 2 of the streets and access plan |
| Swale Borough | An existing track between the two points marked A and coloured green on figure 3 of the streets and access plan |
| Swale Borough | An existing track between the two points marked B and coloured orange on figure 3 of the streets and access plan |
| Swale Borough | An existing track between the two points marked D and coloured yellow on figure 3 of the streets and access plan |
| Swale Borough | A farm track between the two points marked E and G and coloured yellow on figure 3 of the streets and access plan |
| Canterbury City | A farm track between the two points marked F and coloured yellow on figure 3 of the streets and access plan |

SCHEDULE 3

Article 10

STREETS TO BE TEMPORARILY STOPPED UP

| <i>(1)</i> <i>Area</i> | <i>(2)</i> <i>Street to be temporarily stopped up</i> | <i>(3)</i> <i>Extent of temporary stopping up</i> |
|---------------------------|--|---|
| Swale Borough | A farm track coloured yellow on figure 2 of the streets and access plan | Between the two points marked E and a point marked G and coloured yellow on figure 2 of the streets and access plan |
| Swale Borough | An existing track coloured green on figure 3 of the streets and access plan | Between the two points marked A on figure 3 of the streets and access plan |
| Swale Borough | An existing track coloured orange on figure 3 of the streets and access plan | Between the two points marked B on figure 3 of the streets and access plan |
| Swale Borough | An existing track coloured yellow on figure 3 of the streets and access plan | Between the two points marked D on figure 3 of the streets and access plan |
| Swale Borough | A farm track coloured yellow on figure 3 of the streets and access plan | Between the two points marked E and G on figure 3 of the streets and access plan |
| Canterbury City | A farm track coloured yellow on figure 3 of the streets and access plan | Between the two points marked F on figure 3 of the streets and access plan |

SCHEDULE 4

Article 11

PUBLIC RIGHTS OF WAY TO BE TEMPORARILY STOPPED UP

| <i>(1)</i> Area | <i>(2)</i> Public right of way to be temporarily stopped up | <i>(3)</i> Extent of temporary stopping up |
|--------------------|--|---|
| Swale Borough | Footpath ZR 484 (Saxon Shore Way) | Between the points marked A as shown on figures 2 and 3 of the rights of way plan |
| Swale Borough | Footpath ZR 485 | Between the points marked B as shown on figure 2 of the rights of way plan |
| Swale Borough | Footpath ZR 488 | Between the points marked C as shown on figure 3 of the rights of way plan |
| Swale Borough | Footpath ZR 692 | Between the points marked D as shown on figure 3 of the rights of way plan |
| Canterbury City | Footpath CW90 | Between the points marked E as shown on figure 3 of the rights of way plan |
| Canterbury City | Footpath CW55 (Saxon Shore Way) | Between the points marked F as shown on figure 3 of the rights of way plan |

SCHEDULE 5

Article 18

LAND IN WHICH ONLY NEW RIGHTS ETC., MAY BE ACQUIRED

| <i>(1)</i> <i>Plot number(s)</i> | <i>(2)</i> <i>Work No.</i> | <i>(3)</i> <i>Purpose for which rights may be acquired</i> |
|--|-------------------------------|---|
| 3/06, 3/06B, 3/07, 3/07A, 3/07B, 3/08, 3/08A | 5 | Rights to install, use, protect, inspect, alter, remove, replace, improve and maintain electrical underground cables, telecommunications cables and other services including rights of access without or without vehicles, plant and machinery for all purposes in connection with the construction, use, maintenance and decommissioning of the authorised development. Restrictions on erecting buildings or structures, altering ground levels, planting trees or carrying out operations or actions (including but not limited to blasting and piling) which may obstruct, interrupt, or interfere with the exercise of the rights. |
| 3/06, 3/10, 3/12, 3/13 | 7, 9 | Rights to use, alter, improve and maintain an existing means of access including rights of access with or without vehicles, plant and machinery for all purposes in connection with the construction, use, maintenance and decommissioning of the authorised development. Restrictions on erecting buildings or structures, altering ground levels, planting trees or carrying out operations or actions (including but not limited to blasting and piling) which may obstruct, interrupt, or interfere with the exercise of the rights. |
| 3/11 | 8 | Rights to create, manage, alter, improve and maintain a habitat management area including rights of access without or without vehicles, plant and machinery for all purposes in connection with the |

| | | |
|---|---|---|
| | | <p>construction, use, maintenance and decommissioning of the authorised development.</p> <p>Restrictions on erecting buildings or structures, altering ground levels or carrying out operations or actions which may obstruct, interrupt, or interfere with the exercise of the rights.</p> |
| <p>1/01, 1/02, 1/03, 1/06, 1/07, 1/08, 1/09, 1/10, 2/01, 2/02, 2/03, 2/05, 2/06, 2/07, 2/08, 2/09, 2/10, 2/11, 2/12, 2/13, 2/14, 2/15, 2/16, 2/17, 2/18, 2/19, 2/20, 2/21, 2/22, 2/23, 2/24, 2/25, 2/26, 2/27, 2/28, 3/01, 3/01A, 3/01B, 3/02, 3/02A, 3/02B, 3/03, 3/03A, 3/03B, 3/10, 3/11, 4/01, 4/02, 4/03, 4/04, 4/05, 4/06</p> | 9 | <p>Rights to inspect, maintain, repair, alter, remove and reconstruct the flood defences including rights of access without or without vehicles, plant and machinery for all purposes in connection with the construction, use, maintenance and decommissioning of the authorised development.</p> <p>Restrictions on erecting buildings or structures, altering ground levels or carrying out operations or actions which may obstruct, interrupt, or interfere with the exercise of the rights.</p> |

MODIFICATION OF COMPENSATION AND COMPULSORY PURCHASE ENACTMENTS FOR THE CREATION OF NEW RIGHTS

1. The enactments for the time being in force with respect to compensation for the compulsory purchase of land apply, with the necessary modifications as respects compensation, in the case of a compulsory acquisition under this Order of a right by the creation of a new right or the imposition of a restrictive covenant as they apply as respects compensation on the compulsory purchase of land and interests in land.

2.—(1) Without limitation on the scope of paragraph 1, the Land Compensation Act 1973(a) has effect subject to the modifications set out in sub-paragraph (2).

(2) In section 44(1) (compensation for injurious affection), as it applies to compensation for injurious affection under section 7 (measure of compensation in case of severance) of the 1965 Act as substituted by paragraph 4—

- (a) for the words “land is acquired or taken from” there is substituted the words “a right or restrictive covenant over land is purchased from or imposed on”; and
- (b) for the words “acquired or taken from him” there is substituted the words “over which the right is exercisable or the restrictive covenant enforceable”.

3.—(1) Without limitation on the scope of paragraph 1, the 1961 Act has effect subject to the modification set out in sub-paragraph (2).

(2) For section 5A(5A) (relevant valuation date) of the 1961 Act, for (a) and (b) substitute—

“If—

- (a) the acquiring authority enters on land for the purpose of exercising a right in pursuance of a notice of entry under section 11(1) of the 1965 Act (as modified by paragraph 7 of Schedule 7 to the Cleve Hill Solar Park Order 201[]);
- (b) the acquiring authority is subsequently required by a determination under paragraph 13 of Schedule 2A to the 1965 Act (as substituted by paragraph 10 of Schedule 7 to the Cleve Hill Solar Park Order 201[X]) to acquire an interest in the land; and
- (c) the acquiring authority enters on and takes possession of that land

the authority is deemed for the purposes of subsection (3)(A) to have entered on that land where it entered on that land for the purpose of exercising that right.”.

Application of Part 1 the 1965 Act

4.—(1) The 1965 Act is to have effect with the modifications necessary to make it apply to the compulsory acquisition under this Order of a right by the creation of a new right, or to the imposition under this Order of a restrictive covenant, as it applies to the compulsory acquisition under this Order of land, so that, in appropriate contexts, references in that Act to land are read (according to the requirements of the particular context) as referring to, or as including references to—

- (a) the right acquired or to be acquired, or the restriction imposed or to be imposed; or
- (b) the land over which the right is or is to be exercisable, or the restriction is to be enforceable.

(a) 1973 c.26.

(2) Without limitation on the scope of sub-paragraph (1), Part 1 (compulsory purchase under Acquisition of Land Act 1946) of the 1965 Act applies in relation to the compulsory acquisition under this Order of a right by the creation of a new right or, in relation to the imposition of a restriction, with the modifications specified in the following provisions of this Schedule.

5. For section 7 (measure of compensation in the case of severance) of the 1965 Act there is substituted the following section—

“**7.** In assessing the compensation to be paid by the acquiring authority under this Act, regard shall be had not only to the extent (if any) to which the value of the land over which the right is to be acquired or the restrictive covenant is to be imposed is depreciated by the acquisition of the right or the imposition of the covenant but also to the damage (if any) to be sustained by the owner of the land by reason of its severance from other land of the owner, or injuriously affecting that other land by the exercise of the powers conferred by this or the special Act.”.

6. The following provisions of the 1965 Act (which state the effect of a deed poll executed in various circumstances where there is no conveyance by persons with interests in the land), that is to say—

- (a) section 9(4) (failure by owners to convey);
- (b) paragraph 10(3) of Schedule 1 (owners under incapacity);
- (c) paragraph 2(3) of Schedule 2 (absent and untraced owners); and
- (d) paragraphs 2(3) and 7(2) of Schedule 4 (common land),

are so modified as to secure that, as against persons with interests in the land which are expressed to be overridden by the deed, the right which is to be compulsorily acquired or the restrictive covenant which is to be imposed is vested absolutely in the acquiring authority.

7. Section 11 (powers of entry) of the 1965 Act is so modified as to secure that, as from the date on which the acquiring authority has served notice to treat in respect of any right or restrictive covenant, as well as the notice of entry required by subsection (1) of that section (as it applies to compulsory acquisition under article 19), it has power, exercisable in equivalent circumstances and subject to equivalent conditions, to enter for the purpose of exercising that right or enforcing that restrictive covenant (which is deemed for this purpose to have been created on the date of service of the notice); and sections 11A (powers of entry: further notices of entry), 11B (counter-notice requiring possession to be taken on specified date), 12 (penalty for unauthorised entry) and 13 (entry on warrant in the event of obstruction) of the 1965 Act is modified correspondingly.

8. Section 20 (protection for interests of tenants at will, etc.) of the 1965 Act applies with the modifications necessary to secure that persons with such interests in land as are mentioned in that section are compensated in a manner corresponding to that in which they would be compensated on a compulsory acquisition under this Order of that land, but taking into account only the extent (if any) of such interference with such an interest as is actually caused, or likely to be caused, by the exercise of the right or the enforcement of the restrictive covenant in question.

9. Section 22 (protection of acquiring authority’s possession where by inadvertence an estate, right or interest has not been got in) of the 1965 Act as modified by article 22(4) is so modified as to enable the acquiring authority, in circumstances corresponding to those referred to in that section, to continue to be entitled to exercise the right acquired or restrictive covenant imposed, subject to compliance with that section as respects compensation.

10. For Schedule 2A (counter notice requiring purchase of land not in notice to treat) to the 1965 Act substitute—

“SCHEDULE 2A COUNTER-NOTICE REQUIRING PURCHASE OF LAND

Introduction

1.—(1) This Schedule applies where an acquiring authority serve a notice to treat in respect of a right over, or restrictive covenant affecting, the whole or part of a house, building or factory and have not executed a general vesting declaration under section 4 of the 1981 Act as applied by article 20 (application of the 1981 Act) of the Cleve Hill Solar Park Order 201[] in respect of the land to which the notice to treat relates.

(2) But see article 21(3) (acquisition of subsoil only) of the Cleve Hill Solar Park Order 201[] which excludes the acquisition of subsoil only from this Schedule.

2. In this Schedule, “house” includes any park or garden belonging to a house.

Counter-notice requiring purchase of land

3. A person who is able to sell the house, building or factory (“the owner”) may serve a counter-notice requiring the authority to purchase the owner’s interest in the house, building or factory.

4. A counter-notice under paragraph 3 must be served within the period of 28 days beginning with the day on which the notice to treat was served.

Response to counter-notice

5. On receiving a counter-notice, the acquiring authority must decide whether to—

- (a) withdraw the notice to treat,
- (b) accept the counter-notice, or
- (c) refer the counter-notice to the Upper Tribunal.

6. The authority must serve notice of their decision on the owner within the period of 3 months beginning with the day on which the counter-notice is served (“the decision period”).

7. If the authority decides to refer the counter-notice to the Upper Tribunal they must do so within the decision period.

8. If the authority does not serve notice of a decision within the decision period they are to be treated as if they had served notice of a decision to withdraw the notice to treat at the end of that period.

9. If the authority serves notice of a decision to accept the counter-notice, the compulsory purchase order and the notice to treat are to have effect as if they included the owner’s interest in the house, building or factory.

Determination by the Upper Tribunal

10. On a referral under paragraph 7, the Upper Tribunal must determine whether the acquisition of the right or the imposition of the restrictive covenant would—

- (a) in the case of a house, building or factory, cause material detriment to the house, building or factory, or
- (b) in the case of a park or garden, seriously affect the amenity or convenience of the house to which the park or garden belongs.

11. In making its determination, the Upper Tribunal must take into account—

- (a) the effect of the acquisition of the right or the imposition of the covenant,
- (b) the use to be made of the right or covenant proposed to be acquired or imposed, and
- (c) if the right or covenant is proposed to be acquired or imposed for works or other purposes extending to other land, the effect of the whole of the works and the use of the other land.

12. If the Upper Tribunal determines that the acquisition of the right or the imposition of the covenant would have either of the consequences described in paragraph 10, it must determine how much of the house, building or factory the authority ought to be required to take.

13. If the Upper Tribunal determines that the authority ought to be required to take some or all of the house, building or factory, the compulsory purchase order and the notice to treat are to have effect as if they included the owner's interest in that land.

14.—(1) If the Upper Tribunal determines that the authority ought to be required to take some or all of the house, building or factory, the authority may at any time within the period of 6 weeks beginning with the day on which the Upper Tribunal makes its determination withdraw the notice to treat in relation to that land.

(2) If the acquiring authority withdraws the notice to treat under this paragraph they must pay the person on whom the notice was served compensation for any loss or expense caused by the giving and withdrawal of the notice.

(3) Any dispute as to the compensation is to be determined by the Upper Tribunal.”.

PROTECTIVE PROVISIONS

PART 1

PROTECTION FOR ELECTRICITY, GAS, WATER AND SEWERAGE
UNDERTAKERS**Application**

1. For the protection of the affected undertakers referred to in this Part of this Schedule (save for National Grid which is protected by Part 2 of this Schedule, Blue Transmission London Array Limited which is protected by Part 5 of this Schedule, and UKPN which is protected by Part 6 of this Schedule) the following provisions must, unless otherwise agreed in writing between the undertaker and the affected undertaking concerned, have effect.

2. In this Part of this Schedule—

“affected undertaker” means—

- (a) any licence holder within the meaning of Part 1 (electricity supply) of the 1989 Act;
- (b) a gas transporter within the meaning of Part 1 (gas supply) of the Gas Act 1986(a);
- (c) a water undertaker within the meaning of the Water Industry Act 1991(b); or
- (d) a sewerage undertaker within the meaning of Part 1 (preliminary) of the Water Industry Act 1991(c),

for the area of the authorised development but, for the avoidance of doubt, does not include the undertaker specified in Part 2 (National Grid) of this Schedule, and in relation to any apparatus, means the undertaker to whom it belongs or by whom it is maintained;

“alternative apparatus” means alternative apparatus adequate to enable the affected undertaker in question to fulfil its statutory functions in a manner not less efficient than previously;

“apparatus” means—

- (a) in the case of an electricity undertaker, electric lines or electrical plant (as defined in the 1989 Act), belonging to or maintained by that affected undertaker;
- (b) in the case of a gas undertaker, any mains, pipes or other apparatus belonging to or maintained by a gas transporter for the purposes of gas supply;
- (c) in the case of a water undertaker—
 - (i) mains, pipes or other apparatus belonging to or maintained by that affected undertaker for the purposes of water supply; and
 - (ii) any water mains or service pipes (or part of a water main or service pipe) that is the subject of an agreement to adopt made under section 51A (agreements to adopt water main or service pipe at future date) of the Water Industry Act 1991;
- (d) in the case of a sewerage undertaker—
 - (i) any drain or works vested in the affected undertaker under the Water Industry Act 1991; and

(a) 1986 c.44. A new section 7 was substituted by section 5 of the Gas Act 1995 (c.45), and was further amended by section 76 of the Utilities Act 2000 (c.27).

(b) 1991 c.56.

(c) 1991 c.56.

- (ii) any sewer which is so vested or is the subject of a notice of intention to adopt given under section 102(4) (adoption of sewers and disposal works) of that Act or an agreement to adopt made under section 104 of that Act,

and includes a sludge main, disposal main (within the meaning of section 219 (general interpretation) of that Act) or sewer outfall and any manholes, ventilating shafts, pumps or other accessories forming part of any such sewer, drain or works, and includes any structure in which apparatus is or is to be lodged or which gives or will give access to apparatus;

“functions” includes powers and duties; and

“in” in a context referring to apparatus or alternative apparatus in land includes a reference to apparatus or alternative apparatus under, over or upon land.

Precedence of the 1991 Act in respect of apparatus in the streets

3. This Part of this Schedule does not apply to apparatus in respect of which the relations between the undertaker and the affected undertaker are regulated by the provisions of Part 3 (water supply) of the 1991 Act.

No acquisition etc. except by agreement

4. Regardless of any provision in this Order or anything shown on the land plan, the undertaker must not acquire any apparatus otherwise than by agreement.

Removal of apparatus

5.—(1) If, in the exercise of the powers conferred by this Order, the undertaker acquires any interest in any land in which any apparatus is placed, that apparatus must not be removed under this Part of this Schedule and any right of an affected undertaker to maintain that apparatus in that land must not be extinguished until alternative apparatus has been constructed and is in operation to the reasonable satisfaction of the affected undertaker in question.

(2) If, for the purpose of executing any works in, on or under any land purchased, held, or used under this Order, the undertaker requires the removal of any apparatus placed in that land, it must give to the affected undertaker in question written notice of that requirement, together with a plan and section of the work proposed, and of the proposed position of the alternative apparatus to be provided or constructed and in that case (or if in consequence of the exercise of any of the powers conferred by this Order an affected undertaker reasonably needs to remove any of its apparatus) the undertaker must, subject to sub-paragraph (3), afford to the affected undertaker the necessary facilities and rights for the construction of alternative apparatus in other land of the undertaker and subsequently for the maintenance of that apparatus.

(3) If alternative apparatus or any part of such apparatus is to be constructed elsewhere than in other land of the undertaker, or the undertaker is unable to afford such facilities and rights as are mentioned in sub-paragraph (2), in the land in which the alternative apparatus or part of such apparatus is to be constructed, the affected undertaker in question must, on receipt of a written notice to that effect from the undertaker, as soon as reasonably possible use reasonable endeavours to obtain the necessary facilities and rights in the land in which the alternative apparatus is to be constructed.

(4) Any alternative apparatus to be constructed in land of the undertaker under this Part of this Schedule must be constructed in such manner and in such line or situation as may be agreed between the affected undertaker in question and the undertaker or in default of agreement settled by arbitration in accordance with article 35 (arbitration).

(5) The affected undertaker in question must, after the alternative apparatus to be provided or constructed has been agreed or settled by arbitration in accordance with article 35 (arbitration) and after the grant to the affected undertaker of any such facilities and rights as are referred to in sub-paragraph (2) or (3), proceed without unnecessary delay to construct and bring into operation the alternative apparatus and subsequently to remove any apparatus required by the undertaker to be removed under the provisions of this Part of this Schedule.

(6) Regardless of anything in sub-paragraph (5), if the undertaker gives notice in writing to the affected undertaker in question that it desires itself to execute any work, or part of any work in connection with the construction or removal of apparatus in any land controlled by the undertaker, that work, instead of being executed by the affected undertaker, must be executed by the undertaker without unnecessary delay under the superintendence, if given, and to the reasonable satisfaction of the affected undertaker.

(7) Nothing in sub-paragraph (6) authorises the undertaker to execute the placing, installation, bedding, packing, removal, connection or disconnection of any apparatus, or execute any filling around the apparatus (where the apparatus is laid in a trench) within 300 millimetres of the apparatus.

Facilities and rights for alternative apparatus

6.—(1) Where, in accordance with the provisions of this Part of this Schedule, the undertaker affords to an affected undertaker facilities and rights for the construction and maintenance in land of the undertaker of alternative apparatus in substitution for apparatus to be removed, those facilities and rights must be granted upon such terms and conditions as may be agreed between the undertaker and the affected undertaker in question or in default of agreement settled by arbitration in accordance with article 35 (arbitration).

(2) If the facilities and rights to be afforded by the undertaker in respect of any alternative apparatus, and the terms and conditions subject to which those facilities and rights are to be granted, are in the opinion of the arbitrator less favourable on the whole to the affected undertaker in question than the facilities and rights enjoyed by it in respect of the apparatus to be removed and the terms and conditions to which those facilities and rights are subject, the arbitrator must make such provision for the payment of compensation by the undertaker to that affected undertaker as appears to the arbitrator to be reasonable having regard to all the circumstances of the particular case.

Retained apparatus

7.—(1) Not less than 28 days before starting the execution of any works of the type referred to in paragraph 5(2) that are near to, or will or may affect, any apparatus the removal of which has not been required by the undertaker under paragraph 5(2), the undertaker must submit to the affected undertaker in question a plan, section and description of the works to be executed.

(2) Those works must be executed only in accordance with the plan, section and description submitted under sub-paragraph (1) and in accordance with such reasonable requirements as may be made in accordance with sub-paragraph (3) by the affected undertaker for the alteration or otherwise for the protection of the apparatus, or for securing access to it, and the affected undertaker is entitled to watch and inspect the execution of those works.

(3) Any requirements made by an affected undertaker under sub-paragraph (2) must be made within a period of 21 days beginning with the date on which a plan, section and description under sub-paragraph (1) are submitted to it.

(4) If an affected undertaker in accordance with sub-paragraph (3) and in consequence of the works proposed by the undertaker, reasonably requires the removal of any apparatus and gives written notice to the undertaker of that requirement, paragraphs 1 to 6 apply as if the removal of the apparatus had been required by the undertaker under paragraph 5(2).

(5) Nothing in this paragraph precludes the undertaker from submitting at any time or from time to time, but in no case less than 28 days before commencing the execution of any works, a new plan, section and description instead of the plan, section and description previously submitted, and having done so the provisions of this paragraph apply to and in respect of the new plan, section and description.

(6) The undertaker is not required to comply with sub-paragraph (1) in a case of emergency but in that case it must give to the affected undertaker in question notice as soon as is reasonably practicable and a plan, section and description of those works as soon as reasonably practicable

subsequently and must comply with sub-paragraph (2) in so far as is reasonably practicable in the circumstances.

8.—(1) Subject to the following provisions of this paragraph, the undertaker must repay to an affected undertaker the reasonable expenses incurred by that affected undertaker in, or in connection with, the inspection, removal, alteration or protection of any apparatus or the construction of any new apparatus which may be required in consequence of the execution of any such works as are referred to in paragraph 5(2).

(2) There must be deducted from any sum payable under sub-paragraph (1) the value of any apparatus removed under the provisions of this Part of this Schedule, that value being calculated after removal.

(3) If in accordance with the provisions of this Part of this Schedule—

- (a) apparatus of better type, of greater capacity or of greater dimensions is placed in substitution for existing apparatus of worse type, of smaller capacity or of smaller dimensions; or
- (b) apparatus (whether existing apparatus or apparatus substituted for existing apparatus) is placed at a depth greater than the depth at which the existing apparatus was,

and the placing of apparatus of that type or capacity or of those dimensions or the placing of apparatus at that depth, as the case may be, is not agreed by the undertaker or, in default of agreement, is not determined by arbitration in accordance with article 35 (arbitration) to be necessary, then, if such placing involves cost in the construction of works under this Part of this Schedule exceeding that which would have been involved if the apparatus placed had been of the existing type, capacity or dimensions, or at the existing depth, as the case may be, the amount which apart from this sub-paragraph would be payable to the affected undertaker in question by virtue of sub-paragraph (1) must be reduced by the amount of that excess.

(4) For the purposes of sub-paragraph (3)—

- (a) an extension of apparatus to a length greater than the length of existing apparatus is not to be treated as a placing of apparatus of greater dimensions than those of the existing apparatus; and
- (b) where the provision of a joint in a cable is agreed, or is determined to be necessary, the consequential provision of a jointing chamber or of a manhole is to be treated as if it also had been agreed or had been so determined.

(5) An amount which apart from this sub-paragraph would be payable to an affected undertaker in respect of works by virtue of sub-paragraph (1) must, if the works include the placing of apparatus provided in substitution for apparatus placed more than 7 years and 6 months earlier so as to confer on the affected undertaker any financial benefit by deferment of the time for renewal of the apparatus in the ordinary course, be reduced by the amount which represents that benefit.

Expenses and costs

9.—(1) Subject to sub-paragraphs (2) and (3), if by reason or in consequence of the construction of any such works referred to in paragraph 5(2), any damage is caused to any apparatus (other than apparatus the repair of which is not reasonably necessary in view of its intended removal for the purposes of those works) or property of an affected undertaker, or there is any interruption in any service provided, or in the supply of any goods, by any affected undertaker, the undertaker must—

- (a) bear and pay the cost reasonably incurred by that affected undertaker in making good such damage or restoring the supply; and
- (b) make reasonable compensation to that affected undertaker for any other expenses, loss, damages, penalty or costs incurred by the affected undertaker,

by reason or in consequence of any such damage or interruption.

(2) Nothing in sub-paragraph (1) imposes any liability on the undertaker with respect to any damage or interruption to the extent that it is attributable to the act, neglect or default of an affected undertaker, its officers, servants, contractors or agents.

(3) An affected undertaker must give the undertaker reasonable notice of any such claim or demand and no settlement or compromise may be made without the consent of the undertaker which, if it withholds such consent, will have the sole conduct of any settlement or compromise or of any proceedings necessary to resist the claim or demand.

10. Nothing in this Part of this Schedule affects the provisions of any enactment or agreement regulating the relations between the undertaker and an affected undertaker in respect of any apparatus laid or erected in land belonging to the undertaker on the date on which this Order is made.

PART 2

FOR THE PROTECTION OF NATIONAL GRID AS ELECTRICITY UNDERTAKER

Application

1. For the protection of National Grid referred to in this Part of this Schedule the following provisions will, unless otherwise agreed in writing between the undertaker and National Grid, have effect.

Interpretation

2. In this Part of this Schedule—

“alternative apparatus” means appropriate alternative apparatus to the satisfaction of the National Grid to enable the National Grid to fulfil its statutory functions in a manner no less efficient than previously;

“apparatus” means electric lines or electrical plant as defined in the Electricity Act 1989, belonging to or maintained by National Grid;

“authorised development” has the same meaning as in article 2 (interpretation) of this Order (unless otherwise specified) for the purposes of this Part of this Schedule shall include the use and maintenance of the authorised development and construction of any works authorised by this Schedule;

“deed of consent” means a deed of consent, crossing agreement, deed of variation or new deed of grant agreed between the parties acting reasonably in order to vary and/or replace existing easements, agreements, enactments and other such interests so as to secure land rights and interests as are necessary to carry out, maintain, operate and use the apparatus in a manner consistent with the terms of this Part of this Schedule;

“functions” includes powers and duties;

“ground mitigation scheme” means a scheme approved by National Grid (such approval not to be unreasonably withheld or delayed) setting out the necessary measures (if any) for a ground subsidence event;

“ground monitoring scheme” means a scheme for monitoring ground subsidence which sets out the apparatus which is to be subject to such monitoring, the extent of land to be monitored, the manner in which ground levels are to be monitored, the timescales of any monitoring activities and the extent of ground subsidence which, if exceeded, shall require the undertaker to submit for National Grid’s approval a ground mitigation scheme;

“ground subsidence event” means any ground subsidence identified by the monitoring activities set out in the ground monitoring scheme that has exceeded the level described in the ground monitoring scheme as requiring a ground mitigation scheme;

“in” in a context referring to apparatus or alternative apparatus in land includes a reference to apparatus or alternative apparatus under, over, across, along or upon such land;

“maintain” and “maintenance” shall include the ability and right to do any of the following in relation to any apparatus or alternative apparatus of the undertaker including construct, use, repair, alter, inspect, renew or remove the apparatus;

“National Grid” means National Grid Electricity Transmission PLC (Company No. 2366977) whose registered office is at 1-3 Strand, London, WC2N 5EH;

“plan” or “plans” include all designs, drawings, specifications, method statements, soil reports, programmes, calculations, risk assessments and other documents that are reasonably necessary properly and sufficiently to describe and assess the works to be executed;

“specified works” means any of the authorised development or activities undertaken in association with the authorised development which—

- (a) will or may be situated over, or within 15 metres measured in any direction of any apparatus the removal of which has not been required by the undertaker under paragraph 7(2) or otherwise; and/or
- (b) may in any way adversely affect any apparatus the removal of which has not been required by the undertaker under paragraph 7(2) or otherwise.

3. Except for paragraphs 4 (apparatus of National Grid in streets subject to temporary stopping up), 9 (retained apparatus: protection of National Grid as electricity undertaker) 10 (expenses) and 11 (indemnity) this Schedule does not apply to apparatus in respect of which the relations between the undertaker and National Grid are regulated by the provisions of Part 3 of the 1991 Act.

Apparatus of National Grid in streets subject to temporary stopping up

4.—(1) Without prejudice to the generality of any other protection afforded to National Grid elsewhere in the Order, where any street is stopped up under article 10 (temporary stopping up of streets), if National Grid has any apparatus in the street or accessed via that street National Grid will be entitled to the same rights in respect of such apparatus as it enjoyed immediately before the stopping up and the undertaker will grant to National Grid, or will procure the granting to the National Grid of, legal easements reasonably satisfactory to National Grid in respect of such apparatus and access to it prior to the stopping up of any such street or highway.

(2) Notwithstanding the temporary stopping up under the powers of article 10 (temporary stopping up of streets), National Grid will be at liberty at all times to take all necessary access across any such street and/or to execute and do all such works and things in, upon or under any such street as may be reasonably necessary or desirable to enable it to maintain any apparatus which at the time of the stopping up or diversion was in that street.

Protective works to buildings

5.—(1) The undertaker, in the case of the powers conferred by article 14 (protective work to buildings), must exercise those powers so as not to obstruct or render less convenient the access to any apparatus without the written consent of National Grid which will not unreasonably be withheld and, if by reason of the exercise of those powers any damage to any apparatus (other than apparatus the repair of which is not reasonably necessary in view of its intended removal or abandonment) or property of National Grid or any interruption in the supply of electricity, the undertaker must bear and pay on demand the cost reasonably incurred by National Grid in making good such damage or restoring the supply; and, subject to sub-paragraph (2), shall—

- (a) pay compensation to National Grid for any loss sustained by it; and
- (b) indemnify National Grid against all claims, demands, proceedings, costs, damages and expenses which may be made or taken against or recovered from or incurred by National Grid, by reason of any such damage or interruption.

(2) Nothing in this paragraph imposes any liability on the undertaker with respect to any damage or interruption to the extent that such damage or interruption is attributable to the act, neglect or default of National Grid or its contractors or workmen; and National Grid will give to the undertaker reasonable notice of any claim or demand as aforesaid and no settlement or compromise thereof shall be made by National Grid, save in respect of any payment required

under a statutory compensation scheme, without first consulting the undertaker and giving the undertaker an opportunity to make representations as to the claim or demand.

Acquisition of land

6.—(1) Regardless of any provision in this Order or anything shown on the land plans or contained in the book of reference to the Order, the undertaker may not acquire any land interest or apparatus or override any easement or other interest of National Grid otherwise than by agreement (such agreement not to be unreasonably withheld).

(2) As a condition of agreement between the parties in sub-paragraph (1), prior to the carrying out of any part of the authorised works (or in such other timeframe as may be agreed between the undertaker and the promoter) that are subject to the requirements of this Part of this Schedule that will cause any conflict with or breach the terms of any easement and/or other legal or land interest of the undertaker and/or affects the provisions of any enactment or agreement regulating the relations between the undertaker and the promoter in respect of any apparatus laid or erected in land belonging to or secured by the promoter, the promoter must as the undertaker reasonably requires enter into such deeds of consent upon such terms and conditions as may be agreed between the undertaker and the promoter acting reasonably and which must be no less favourable on the whole to the undertaker unless otherwise agreed by the undertaker, and it will be the responsibility of the promoter to procure and/or secure the consent and entering into of such deeds and variations by all other third parties with an interest in the land at that time who are affected by such authorised works.

(3) The undertaker and National Grid agree that where there is any inconsistency or duplication between the provisions set out in this Part of this Schedule relating to the relocation and/or removal of apparatus (including but not limited to the payment of costs and expenses relating to such relocation and/or removal of apparatus) and the provisions of any existing easement, rights, agreements and licences granted, used, enjoyed or exercised by National Grid as of right or other use in relation to the apparatus, then the provisions in this Schedule shall prevail.

(4) Any agreement or consent granted by National Grid under paragraph 9 or any other paragraph of this Part of this Schedule, shall not be taken to constitute agreement under sub-paragraph (1).

Removal of apparatus

7.—(1) If, in the exercise of the agreement reached in accordance with paragraph 6 or in any other authorised manner, the undertaker acquires any interest in any Order land in which any apparatus is placed, that apparatus must not be removed under this Part of this Schedule and any right of National Grid to maintain that apparatus in that land must not be extinguished until alternative apparatus has been constructed, and is in operation to the reasonable satisfaction of National Grid in accordance with sub-paragraphs (2) to (5) inclusive.

(2) If, for the purpose of executing any works compromised in the authorised development in, on, under or over any land purchased, held, appropriated or used under this Order, the undertaker requires the removal of any apparatus placed in that land, it must give to National Grid 56 days' advance written notice of that requirement, together with a plan of the work proposed, and of the proposed position of the alternative apparatus to be provided or constructed and in that case (or if in consequence of the exercise of any of the powers conferred by this Order National Grid reasonably needs to remove any of its apparatus) the undertaker must, subject to sub-paragraph (3), afford to National Grid to its satisfaction (taking into account paragraph 8(1) below) the necessary facilities and rights—

- (a) for the construction of alternative apparatus in other land of or land secured by the undertaker; and
- (b) subsequently for the maintenance of that apparatus.

(3) If alternative apparatus or any part of such apparatus is to be constructed elsewhere than in other land of or land secured by the undertaker, or the undertaker is unable to afford such facilities and rights as are mentioned in sub-paragraph (2), in the land in which the alternative apparatus or

part of such apparatus is to be constructed, National Grid must, on receipt of a written notice to that effect from the undertaker, take such steps as are reasonable in the circumstances in an endeavour to obtain the necessary facilities and rights in the land in which the alternative apparatus is to be constructed save that this obligation shall not extend to the requirement for National Grid to use its compulsory purchase powers to this end unless it elects to so do.

(4) Any alternative apparatus to be constructed in land of or land secured by the undertaker under this Part of this Schedule must be constructed in such manner and in such line or situation as may be agreed between National Grid and the undertaker.

(5) National Grid must, after the alternative apparatus to be provided or constructed has been agreed, and subject to the grant to National Grid of any such facilities and rights as are referred to in sub-paragraph (2) or (3), proceed without unnecessary delay to construct and bring into operation the alternative apparatus and subsequently to remove any apparatus required by the undertaker to be removed under the provisions of this Part of this Schedule.

Facilities and rights for alternative apparatus

8.—(1) Where, in accordance with the provisions of this Part of this Schedule, the undertaker affords to or secures National Grid facilities and rights in land for the construction, use, maintenance and protection in land of the undertaker of alternative apparatus in substitution for apparatus to be removed, those facilities and rights must be granted upon such terms and conditions as may be agreed between the undertaker and National Grid and must be no less favourable on the whole to National Grid than the facilities and rights enjoyed by it in respect of the apparatus to be removed unless agreed by National Grid.

(2) If the facilities and rights to be afforded by the undertaker and agreed with National Grid under sub-paragraph (1) above in respect of any alternative apparatus, and the terms and conditions subject to which those facilities and rights are to be granted, are less favourable on the whole to National Grid than the facilities and rights enjoyed by it in respect of the apparatus to be removed and the terms and conditions to which those facilities and rights are subject in the matter will be referred to arbitration under paragraph 15 (arbitration) and the arbitrator shall make such provision for the payment of compensation by the undertaker to National Grid as appears to the arbitrator to be reasonable having regard to all the circumstances of the particular case. In respect of the appointment of an arbitrator under this sub-paragraph (2) article 35 (arbitration) of the Order shall apply.

Retained apparatus: Protection of National Grid as Electricity Undertaker

9.—(1) Not less than 56 days before the commencement of any authorised development that is near to, or will or may affect, any apparatus the removal of which has not been required by the undertaker under paragraph 7(2) or otherwise and to which paragraph 7(2)(a) or 7(2)(b) applies, the undertaker must submit to National Grid a plan and seek from National Grid details of the underground extent of their electricity tower foundations.

(2) In relation to works which will or may be situated on, over, under or within (i) 15 metres measured in any direction of any apparatus, or (ii) involve embankment works within 15 metres of any apparatus, the plan to be submitted to National Grid under sub-paragraph (1) must include a method statement and describe—

- (a) the exact position of the works;
- (b) the level at which these are proposed to be constructed or renewed;
- (c) the manner of their construction or renewal including details of excavation, positioning of plant;
- (d) the position of all apparatus;
- (e) by way of detailed drawings, every alteration proposed to be made to or close to any such apparatus;
- (f) any intended maintenance regimes; and
- (g) an assessment of risks of rise of earth issues.

(3) In relation to any works which will or may be situated on, over, under or within [10] metres of any part of the foundations of an electricity tower or between any two or more electricity towers, the plan to be submitted under sub-paragraph (1) must in addition to the matters set out in sub-paragraph (2) include a method statement describing—

- (a) details of any cable trench design including route, dimensions, clearance to pylon foundations;
- (b) demonstration that pylon foundations will not be affected prior to, during and post construction;
- (c) details of load bearing capacities of trenches;
- (d) details of cable installation methodology including access arrangements, jointing bays and backfill methodology;
- (e) a written management plan for high voltage hazard during construction and ongoing maintenance of the cable route;
- (f) written details of the operations and maintenance regime for the cable, including frequency and method of access;
- (g) assessment of earth rise potential if reasonably required by the National Grid's engineers; and
- (h) evidence that trench bearing capacity is to be designed to 26 tonnes to take the weight of overhead line construction traffic.

(4) The undertaker must not commence any works to which sub-paragraphs (1), (2), or (3) apply until National Grid has given written approval of the plan so submitted.

(5) Any approval of National Grid required under sub-paragraphs (1), (2), or (3)—

- (a) may be given subject to reasonable conditions for any purpose mentioned in sub-paragraphs (6) or (8); and
- (b) must not be unreasonably withheld.

(6) In relation to a work to which sub-paragraphs (1), (2), or (3) apply, National Grid may require such modifications to be made to the plans as may be reasonably necessary for the purpose of securing its apparatus against interference or risk of damage or for the purpose of providing or securing proper and convenient means of access to any apparatus.

(7) Works to which this paragraph applies must only be executed in accordance with the plan, submitted under sub-paragraph (1) or as relevant sub-paragraphs (2), (3) or (6) as approved or as amended from time to time by agreement between the undertaker and National Grid and in accordance with such reasonable requirements as may be made in accordance with sub-paragraphs (5), (6), (8) and/or (9) by National Grid for the alteration or otherwise for the protection of the apparatus, or for securing access to it, and National Grid will be entitled to watch and inspect the execution of those works.

(8) Where National Grid require any protective works to be carried out either by themselves or by the undertaker (whether of a temporary or permanent nature) such protective works must be carried out to National Grid's satisfaction prior to the commencement of any authorised development (or any relevant part thereof) to which sub-paragraph (1) applies and National Grid must give 56 days' notice of such works from the date of submission of a plan in line with sub-paragraphs (1), (2), (3) or (6) (except in an emergency).

(9) If National Grid in accordance with sub-paragraphs (6) or (8) and in consequence of the works proposed by the undertaker, reasonably requires the removal of any apparatus and gives written notice to the undertaker of that requirement, sub-paragraphs (1) to (3) and (6) to (7) shall apply as if the removal of the apparatus had been required by the undertaker under paragraph 7(2).

(10) Nothing in this paragraph shall preclude the undertaker from submitting at any time or from time to time, but in no case less than 56 days before commencing the execution of any work, a new plan, instead of the plan previously submitted, and having done so the provisions of this paragraph shall apply to and in respect of the new plan.

(11) The undertaker will not be required to comply with sub-paragraph (1) where it needs to carry out emergency works as defined in the 1991 Act but in that case it must give to National Grid notice as soon as is reasonably practicable and a plan of those works and must—

- (a) comply with sub-paragraphs (6), (7) and (8) insofar as is reasonably practicable in the circumstances; and
- (b) comply with sub-paragraph (12) at all times.

(12) At all times when carrying out any works authorised under the Order, the undertaker must comply with National Grid's policies for development near overhead lines ENA TA 43-8 and the Health and Safety Executive's guidance note 6 "Avoidance of Danger from Overhead Lines".

Expenses

10.—(1) Subject to the following provisions of this paragraph, the undertaker shall pay to National Grid on demand all charges, costs and expenses reasonably anticipated or incurred by National Grid in, or in connection with, the inspection, removal, relaying or replacing, alteration or protection of any apparatus or the construction of any new apparatus or alternative apparatus which may be required in consequence of the execution of any such works as are referred to in this Part of this Schedule including without limitation—

- (a) any costs reasonably incurred or compensation properly paid in connection with the acquisition of rights or the exercise of statutory powers for such apparatus including without limitation in the event that National Grid elects to use compulsory purchase powers to acquire any necessary rights under paragraph 7(3);
- (b) in connection with the cost of the carrying out of any diversion work or the provision of any alternative apparatus;
- (c) the cutting off of any apparatus from any other apparatus or the making safe of redundant apparatus;
- (d) the approval of plans;
- (e) the carrying out of protective works, plus a capitalised sum to cover the cost of maintaining and renewing permanent protective works; and
- (f) the survey of any land, apparatus or works, the inspection and monitoring of works or the installation or removal of any temporary works reasonably necessary in consequence of the execution of any such works referred to in this Part of this Schedule.

(2) There will be deducted from any sum payable under sub-paragraph (1) the value of any apparatus removed under the provisions of this Part of this Schedule and which is not re-used as part of the alternative apparatus, that value being calculated after removal.

(3) If in accordance with the provisions of this Part of this Schedule—

- (a) apparatus of better type, of greater capacity or of greater dimensions is placed in substitution for existing apparatus of worse type, of smaller capacity or of smaller dimensions; or
- (b) apparatus (whether existing apparatus or apparatus substituted for existing apparatus) is placed at a depth greater than the depth at which the existing apparatus was situated,

and the placing of apparatus of that type or capacity or of those dimensions or the placing of apparatus at that depth, as the case may be, is not agreed by the undertaker or, in default of agreement settled by arbitration in accordance with article 35 (arbitration) of the Order to be necessary, then, if such placing involves cost in the construction of works under this Part of this Schedule exceeding that which would have been involved if the apparatus placed had been of the existing type, capacity or dimensions, or at the existing depth, as the case may be, the amount which apart from this sub-paragraph would be payable to National Grid by virtue of sub-paragraph (1) will be reduced by the amount of that excess save where it is not possible in the circumstances to obtain the existing type of apparatus at the same capacity and dimensions or place at the existing depth in which case full costs will be borne by the undertaker.

(4) For the purposes of sub-paragraph (3)—

- (a) an extension of apparatus to a length greater than the length of existing apparatus will not be treated as a placing of apparatus of greater dimensions than those of the existing apparatus; and
- (b) where the provision of a joint in a pipe or cable is agreed, or is determined to be necessary, the consequential provision of a jointing chamber or of a manhole will be treated as if it also had been agreed or had been so determined.

(5) An amount which apart from this sub-paragraph would be payable to National Grid in respect of works by virtue of sub-paragraph (1) will, if the works include the placing of apparatus provided in substitution for apparatus placed more than 7 years and 6 months earlier so as to confer on National Grid any financial benefit by deferment of the time for renewal of the apparatus in the ordinary course, be reduced by the amount which represents that benefit.

Indemnity

11.—(1) Subject to sub-paragraphs (2) and (3), if by reason or in consequence of the construction of any works authorised by this Part of this Schedule or in consequence of the construction, use, maintenance or failure of any of the authorised development by or on behalf of the undertaker or in consequence of any act or default of the undertaker (or any person employed or authorised by him) in the course of carrying out such works (including without limitation works carried out by the undertaker under this Part of this Schedule or any subsidence resulting from any of these works), any damage is caused to any apparatus or alternative apparatus (other than apparatus the repair of which is not reasonably necessary in view of its intended removal for the purpose of those works) or property of National Grid, or there is any interruption in any service provided, or in the supply of any goods, by National Grid, or National Grid becomes liable to pay any amount to any third party, the undertaker will—

- (a) bear and pay on demand the cost reasonably incurred by National Grid in making good such damage or restoring the supply; and
- (b) indemnify National Grid for any other expenses, loss, demands, proceedings, damages, claims, penalty or costs incurred by or recovered from National Grid, by reason or in consequence of any such damage or interruption or National Grid becoming liable to any third party as aforesaid.

(2) The fact that any act or thing may have been done by National Grid on behalf of the undertaker or in accordance with a plan approved by National Grid or in accordance with any requirement of National Grid as a consequence of the authorised development or under its supervision will not (unless sub-paragraph (3) applies), excuse the undertaker from liability under the provisions of this sub-paragraph (2) where the undertaker fails to carry out and execute the works properly with due care and attention and in a skilful and workman like manner or in a manner that does not materially accord with the approved plan or as otherwise agreed between the undertaker and National Grid.

(3) Nothing in sub-paragraph (1) shall impose any liability on the undertaker in respect of—

- (a) any damage or interruption to the extent that it is attributable to the neglect or default of National Grid, its officers, servants, contractors or agents; and
- (b) any authorised development and/or any other works authorised by this Part of this Schedule carried out by National Grid as an assignee, transferee or lessee of the undertaker with the benefit of the Order pursuant to section 156 of the 2008 Act or article 5(b) (benefit of the Order) of the Order subject to the proviso that once such works become apparatus (“new apparatus”), any works yet to be executed and not falling within this sub-section 11(3)(b) will be subject to the full terms of this Part of this Schedule including this paragraph 11 in respect of such new apparatus.

(4) National Grid must give the undertaker reasonable notice of any such claim or demand and no settlement or compromise shall be made, unless payment is required in connection with a statutory compensation scheme without first consulting the undertaker and considering its representations.

(5) National Grid must use its reasonable endeavours to mitigate in whole or in part and to minimise any costs, expenses, loss, demands, and penalties to which the indemnity under this paragraph 11 applies where it is within National Grid's reasonable ability and control to do so and which expressly excludes any obligation to mitigate liability arising from third parties which is outside of National Grid's control. If reasonably requested to do so by the undertaker, National Grid shall provide an explanation of how the claim has been minimised, where possible.

Enactments and agreements

12. Save to the extent provided for to the contrary elsewhere in this Part of this Schedule or by agreement in writing between the undertaker and National Grid, nothing in this Part of this Schedule shall affect the provisions of any enactment or agreement regulating the relations between the undertaker and National Grid in respect of any apparatus laid or erected in land belonging to the undertaker on the date on which this Order is made.

Co-operation

13.—(1) Where in consequence of the proposed construction of any of the authorised development, the undertaker or National Grid requires the removal of apparatus under paragraph 7(2) or an National Grid makes requirements for the protection or alteration of apparatus under paragraph 9, the undertaker shall use its best endeavours to co-ordinate the execution of the works in the interests of safety and the efficient and economic execution of the authorised development and taking into account the need to ensure the safe and efficient operation of National Grid's undertaking and National Grid shall use its best endeavours to co-operate with the undertaker for that purpose.

(2) For the avoidance of doubt whenever National Grid's consent, agreement or approval to is required in relation to plans, documents or other information submitted by the undertaker or the taking of action by the undertaker, it must not be unreasonably withheld or delayed.

Access

14. If in consequence of the agreement reached in accordance with paragraph 6 or the powers granted under this Order the access to any apparatus is materially obstructed, the undertaker must provide such alternative means of access to such apparatus as will enable National Grid to maintain or use the apparatus no less effectively than was possible before such obstruction.

Arbitration

15. Save for differences or disputes arising under paragraphs 7(2), 7(4), 8(1) and 9 any difference or dispute arising between the undertaker and National Grid under this Part of this Schedule must, unless otherwise agreed in writing between the undertaker and National Grid, be determined by arbitration in accordance with article 35 (arbitration).

Notices

16. The plans submitted to National Grid by the undertaker pursuant to paragraph 9(1) must be sent to National Grid Plant Protection at plantprotection@nationalgrid.com or such other address as National Grid may from time to time appoint instead for that purpose and notify to the undertaker in writing.

PART 3

PROTECTION FOR OPERATORS OF ELECTRONIC COMMUNICATIONS CODE NETWORKS

1. For the protection of any operator, the following provisions, unless otherwise agreed in writing between the undertaker and the operator, have effect.

2. In this Part of this Schedule—

“the 2003 Act” means the Communications Act 2003;

“conduit system” has the same meaning as in the electronic communications code and references to providing a conduit system is construed in accordance with paragraph 1(3A) of that code;

“electronic communications apparatus” has the same meaning as in the electronic communications code;

“the electronic communications code” has the same meaning as in Chapter 1 of Part 2 of the 2003 Act(a);

“electronic communications code network” means—

(a) so much of an electronic communications network or conduit system provided by an electronic communications code operator as is not excluded from the application of the electronic communications code by a direction under section 106 of the 2003 Act; and

(b) an electronic communications network which the Secretary of State is providing or proposing to provide;

“electronic communications code operator” means a person in whose case the electronic communications code is applied by a direction under section 106 of the 2003 Act; and

“operator” means the operator of an electronic communications code network.

3. The exercise of the powers of article 26 (statutory undertakers) are subject to part 10 of Schedule 3A to the Communications Act 2003(b).

4.—(1) Subject to sub-paragraphs (2) to (4), if as the result of the authorised development or their construction, or of any subsidence resulting from any of those works—

(a) any damage is caused to any electronic communications apparatus belonging to an operator (other than apparatus the repair of which is not reasonably necessary in view of its intended removal for the purposes of those works, or other property of an operator); or

(b) there is any interruption in the supply of the service provided by an operator, the undertaker must bear and pay the cost reasonably incurred by the operator in making good such damage or restoring the supply and must—

(i) make reasonable compensation to an operator for loss sustained by it; and

(ii) indemnify an operator against claims, demands, proceedings, costs, damages and expenses which may be made or taken against, or recovered from, or incurred by, an operator by reason, or in consequence of, any such damage or interruption.

(2) Nothing in sub-paragraph (1) imposes any liability on the undertaker with respect to any damage or interruption to the extent that it is attributable to the act, neglect or default of an operator, its officers, servants, contractors or agents.

(3) The operator must give the undertaker reasonable notice of any such claim or demand and no settlement or compromise of the claim or demand may be made without the consent of the undertaker which, if it withholds such consent, will have the sole conduct of any settlement or compromise or of any proceedings necessary to resist the claim or demand.

(a) See section 106.

(b) 2003 c.21.

(4) Any difference arising between the undertaker and the operator under this paragraph must be referred to and settled by arbitration under article 35 (arbitration).

5. This Part of this Schedule does not apply to—

- (a) any apparatus in respect of which the relations between the undertaker and an operator are regulated by the provisions of Part 3 of the 1991 Act; or
- (b) any damage, or any interruption, caused by electro-magnetic interference arising from the construction or use of the authorised development.

6. Nothing in this Part of this Schedule affects the provisions of any enactment or agreement regulating the relations between the undertaker and an operator in respect of any apparatus laid or erected in land belonging to the undertaker on the date on which this Order is made.

PART 4

FOR THE PROTECTION OF THE DRAINAGE AUTHORITIES

1. The provisions of this Part have effect for the protection of a drainage authority unless otherwise agreed in writing between undertaker and the drainage authority.

2. In this Part—

“construction” includes execution, placing, altering, replacing, relaying and removal; and “construct” and “constructed” must be construed accordingly;

“drainage authority” means the drainage board concerned within the meaning of section 23 of the Land Drainage Act 1991;

“drainage work” means any watercourse including any land that provides or is expected to provide flood storage capacity for any watercourse and any bank, wall, embankment or other structure, or any appliance, constructed or used for land drainage, flood defence, sea defence or tidal monitoring excluding the existing flood defence;

“ordinary watercourse” has the meaning given in the Land Drainage Act 1991(a);

“plans” includes sections, drawings, specifications and method statements;

“specified work” means so much of any work or operation authorised by this Order as is in, on, under, over or within 16 metres of a drainage work or is otherwise likely to—

- (a) affect any drainage work or the volumetric rate of flow of water in or flowing to or from any drainage work;
- (b) affect the flow, purity, or quality of water in any watercourse; or
- (c) affect the conservation, distribution or use of water resources.

3.—(1) Before beginning to construct any specified work, the undertaker must submit to the drainage authority plans of the specified work and such further particulars available to it as the drainage authority may within 28 days of the submission of the plans reasonably require.

(2) Any such specified work must not be constructed except in accordance with such plans as may be approved in writing by the drainage authority or determined under paragraph 3.

(3) Any approval of the drainage authority required under this paragraph—

- (a) must not be unreasonably withheld or delayed;
- (b) is deemed to have been given if it is neither given nor refused within 2 months of the submission of the plans for approval (or submission of further particulars if required by the drainage authority under sub-paragraph (1)) or, in the case of a refusal, if it is not accompanied by a statement of the grounds of refusal; and

(a) See section 72(1).

(c) may be given subject to such reasonable requirements as the drainage authority may make for the protection of any drainage work.

(4) The drainage authority must use its reasonable endeavours to respond to the submission of any plans before the expiration of the period mentioned in sub-paragraph (3)(b).

4. Without limiting paragraph 3, the requirements which the drainage authority may make under that paragraph include conditions requiring the undertaker at its own expense to construct such protective works, whether temporary or permanent, during the construction of the specified work (including the provision of flood banks, walls or embankments or other new works and the strengthening, repair or renewal of existing banks, walls or embankments) as are reasonably necessary—

(a) to safeguard any drainage work against damage; or

(b) to secure that its efficiency for flood defence purposes is not impaired and that the risk of flooding is not otherwise increased,

by reason of any specified work.

5.—(1) Subject to sub-paragraph (2), any specified work, and all protective works required by the drainage authority under paragraph 4, must be constructed—

(a) without unreasonable delay in accordance with the plans approved or deemed to have been approved or settled under this Part; and

(b) to the reasonable satisfaction of the drainage authority,

and an officer of the drainage authority is entitled to watch and inspect the construction of such works.

(2) The undertaker must give to the drainage authority—

(a) not less than 14 days' notice in writing of its intention to commence construction of any specified work; and

(b) notice in writing of its completion not later than 7 days after the date on which it is brought into use.

(3) If the drainage authority reasonably requires, the undertaker must construct all or part of the protective works so that they are in place before the construction of the specified work.

(4) If any part of a specified work or any protective work required by the drainage authority is constructed otherwise than in accordance with the requirements of this Part, the drainage authority may by notice in writing require the undertaker at the undertaker's expense to comply with the requirements of this Part or (if the undertaker so elects and the drainage authority in writing consents, such consent not to be unreasonably withheld or delayed) to remove, alter or pull down the work and, where removal is required, to restore the site to its former condition to such extent and within such limits as the drainage authority reasonably requires.

(5) Subject to sub-paragraph (6), if within a reasonable period, being not less than 28 days from the date when a notice under sub-paragraph (4) is served on the undertaker, the undertaker has failed to begin taking steps to comply with the requirements of the notice and subsequently to make reasonably expeditious progress towards their implementation, the drainage authority may execute the works specified in the notice, and any expenditure incurred by it in so doing is recoverable from the undertaker.

(6) In the event of any dispute as to whether sub-paragraph (4) is properly applicable to any work in respect of which notice has been served under that sub-paragraph, or as to the reasonableness of any requirement of such a notice, the drainage authority must not except in emergency exercise the powers conferred by sub-paragraph (4) until the dispute has been finally determined.

6.—(1) Subject to sub-paragraph (5) the undertaker must from the commencement of the construction of any specified work maintain in good repair and condition and free from obstruction any drainage work that is situated within the limits of deviation on land held by the undertaker for the purposes of or in connection with the specified work, whether or not the drainage work is constructed under the powers conferred by this Order or is already in existence.

(2) If any drainage work that the undertaker is liable to maintain is not maintained to the reasonable satisfaction of the drainage authority, the drainage authority may by notice in writing require the undertaker to repair and restore the work, or any part of such work, or (if the undertaker so elects and the drainage authority in writing consents, such consent not to be unreasonably withheld or delayed), to remove the work and restore the site to its former condition, to such extent and within such limits as the drainage authority reasonably requires.

(3) If, within a reasonable period being not less than 28 days beginning with the date on which a notice in respect of any drainage work is served under sub-paragraph (2) on the undertaker, the undertaker has failed to begin taking steps to comply with the reasonable requirements of the notice and has not subsequently made reasonably expeditious progress towards their implementation, the drainage authority may do what is necessary for such compliance and may recover any expenditure reasonably incurred by it in so doing from the undertaker.

(4) In the event of any dispute as to the reasonableness of any requirement of a notice served under sub-paragraph (2), the drainage authority must not except in a case of emergency exercise the powers conferred by sub-paragraph (3) until the dispute has been finally determined.

(5) This paragraph does not apply to—

- (a) drainage works that are vested in the drainage authority or that the drainage authority or another person is liable to maintain and is not prevented by this Order from so doing; and
- (b) any obstruction of a drainage work for the purpose of a work or operation authorised by this Order and carried out in accordance with the provisions of this Part.

7. If by reason of the construction of any specified work or of the failure of any such work the efficiency of any drainage work for flood defence purposes is impaired, or the drainage work is otherwise damaged, the impairment or damage must be made good by the undertaker to the reasonable satisfaction of the drainage authority and, if the undertaker fails to do so, the drainage authority may make good the impairment or damage and recover from the undertaker the expense reasonably incurred by it in doing so.

8. The undertaker must indemnify the drainage authority in respect of all costs, charges and expenses that the drainage authority may reasonably incur, have to pay or may sustain—

- (a) in the examination or approval of plans under this Part;
- (b) in inspecting the construction of any specified work or any protective works required by the drainage authority under this Part; and
- (c) in carrying out of any surveys or tests by the drainage authority that are reasonably required in connection with the construction of the specified work.

9.—(1) Without limiting the other provisions of this Part, the undertaker must indemnify the drainage authority in respect of all claims, demands, proceedings, costs, damages, expenses or loss that may be made or taken against, recovered from or incurred by, the drainage authority by reason of—

- (a) any damage to any drainage work so as to impair its efficiency for the purposes of flood defence;
- (b) any raising or lowering of the water table in land adjoining the authorised development or any sewers, drains and watercourses; or
- (c) any flooding or increased flooding of any such land,

that is caused by the construction of any specified work or any act or omission of the undertaker, its contractors, agents or employees whilst engaged on the work.

(2) The drainage authority must give to the undertaker reasonable notice of any such claim or demand, and no settlement or compromise may be made without the agreement of the undertaker which agreement must not be unreasonably withheld or delayed.

10. The fact that any work or thing has been executed or done by the undertaker in accordance with a plan approved or deemed to be approved by the drainage authority, or to its satisfaction, or

in accordance with any directions or award of an arbitrator, does not relieve the undertaker from any liability under this Part.

11. Any dispute between the undertaker and the drainage authority under this Part, if the parties agree, must be determined by arbitration under article 35 (arbitration), but otherwise must be determined by the Secretary of State for Environment, Food and Rural Affairs and the Secretary of State for Business, Energy and Industrial Strategy acting jointly on a reference to them by the undertaker or the drainage authority, after notice in writing by one to the other.

PART 5

FOR THE PROTECTION OF BLUE TRANSMISSION LONDON ARRAY LIMITED

Application

1. For the protection of BTLAL referred to in this Part of this Schedule the following provisions will, unless otherwise agreed in writing between the undertaker and BTLAL, have effect.

Interpretation

2. In this Part of this Schedule—

“agreements” means (i) the Cooperation Agreement and (ii) the Land and Works Agreement in the agreed form, or substantially the same form, as the terms settled between BTLAL and the undertaker on 12 November 2019, or as otherwise agreed in writing between the undertaker and BTLAL;

“apparatus” means the existing cables having transportation of electric power as its primary purpose and any existing associated low voltage, fibre-optic control or communications cable from the London Array offshore windfarm to the BTLAL substation at Cleve Hill near Graveney;

“BTLAL” means Blue Transmission London Array Limited (company number 08275752);

“cable corridor land” means all land in which the apparatus lies as identified on Sheet 3 of the Land Plan labelled 3/05;

“commence” has the same meaning as in article 2 of this Order and commencement must be construed to have the same meaning;

“lenders” means those parties having loaned monies to BTLAL in respect of the apparatus at the time the agreements are entered into.

Agreements

3. If, at any point during the construction of the development any work is to be undertaken on the cable corridor land the undertaker shall not commence the works unless—

- (a) the agreements have been entered into by the undertaker and BTLAL; or
- (b) in the event the agreements are not entered into, such alternative protection as determined pursuant to paragraph 5 is in place for the protection of BTLAL.

Co-operation

4.—(1) If only as a consequence of achieving the approval of the agreements from the lenders reasonable and equitable amendments are required by those lenders, the undertaker and BTLAL shall co-operate with each other and at all times act in good faith for the purpose of trying to agree those amendments.

(2) For the avoidance of doubt whenever the undertaker's or BTLAL's consent, agreement or approval is required under this Part of this Schedule it must not be unreasonably withheld or delayed.

Arbitration

5. Any difference or dispute arising between the undertaker and BTLAL under this Part of this Schedule, including but not limited to the terms of the agreements, must, unless otherwise agreed in writing between the undertaker and BTLAL, be determined by arbitration in accordance with article 35 (arbitration).

PART 6

FOR THE PROTECTION OF UKPN

1. For the protection of UKPN as referred to in this part of this Schedule the following provisions have effect, unless otherwise agreed in writing between the undertaker and UKPN.

2. In this part of this Schedule—

“alternative apparatus” means alternative apparatus adequate to enable UKPN to fulfil its statutory functions in a manner not less efficient than previously;

“apparatus” means electric lines or electrical plant (as defined in the 1989 Act), belonging to or maintained by UKPN;

“functions” includes powers and duties;

“in”, in a context referring to apparatus or alternative apparatus in land, includes a reference to apparatus or alternative apparatus under, over or upon land; and

“UKPN” means South Eastern Power Networks plc (Company No. 03043097) whose registered office is at Newington House, 237 Southwark Bridge Road, London SE1 6NP;

3. This part of this Schedule does not apply to apparatus in respect of which the relations between the undertaker and UKPN are regulated by the provisions of Part 3 of the 1991 Act.

4. Regardless of the temporary prohibition or restriction of use of streets under the powers conferred by article 10 (temporary stopping up of streets), UKPN is at liberty at all times to take all necessary access across any such street and to execute and do all such works and things in, upon or under any such street as may be reasonably necessary or desirable to enable it to maintain any apparatus which at the time of the prohibition or restriction was in that street.

5. Regardless of any provision in this Order or anything shown on the land plans, the undertaker must not acquire any apparatus otherwise than by agreement.

6.—(1) If, in the exercise of the powers conferred by this Order, the undertaker acquires any interest in any land in which any apparatus is placed or over which access to any apparatus is enjoyed or requires that UKPN's apparatus is relocated or diverted, that apparatus must not be removed under this part of this Schedule, and any right of UKPN to maintain that apparatus in that land and to gain access to it must not be extinguished, until alternative apparatus has been constructed and is in operation, and access to it has been provided, to the reasonable satisfaction of UKPN in accordance with sub-paragraphs (2) to (7).

(2) If, for the purpose of executing any works in, on or under any land purchased, held, appropriated or used under this Order, the undertaker requires the removal of any apparatus placed in that land, the undertaker must give to UKPN written notice of that requirement, together with a plan and section of the work proposed, and of the proposed position of the alternative apparatus to be provided or constructed and in that case (or if in consequence of the exercise of any of the powers conferred by this Order UKPN reasonably needs to remove any of its apparatus) the undertaker must, subject to sub-paragraph (3), afford to UKPN the necessary facilities and rights

for the construction of alternative apparatus in other land of the undertaker and subsequently for the maintenance of that apparatus.

(3) If alternative apparatus or any part of such apparatus is to be constructed elsewhere than in other land of the undertaker, or the undertaker is unable to afford such facilities and rights as are mentioned in sub-paragraph (2), in the land in which the alternative apparatus or part of such apparatus is to be constructed, UKPN must, on receipt of a written notice to that effect from the undertaker, as soon as reasonably possible use reasonable endeavours to obtain the necessary facilities and rights in the land in which the alternative apparatus is to be constructed provided that this obligation shall not require UKPN to exercise any power it may have to acquire any land or rights by compulsory purchase order.

(4) Any alternative apparatus to be constructed in land of the undertaker under this part of this Schedule must be constructed in such manner and in such line or situation as may be agreed between UKPN and the undertaker or in default of agreement settled by arbitration in accordance with article 35 (arbitration).

(5) UKPN must, after the alternative apparatus to be provided or constructed has been agreed or settled by arbitration in accordance with article 35 (arbitration), and after the grant to UKPN of any such facilities and rights as are referred to in sub-paragraph (2) or (3), proceed without unnecessary delay to construct and bring into operation the alternative apparatus and subsequently to remove any apparatus required by the undertaker to be removed under the provisions of this part of this Schedule.

(6) Regardless of anything in sub-paragraph (5), if the undertaker gives notice in writing to UKPN that it desires itself to execute any work, or part of any work, in connection with the construction or removal of apparatus in any land controlled by the undertaker, that work, instead of being executed by UKPN, must be executed by the undertaker without unnecessary delay under the superintendence, if given, and to the reasonable satisfaction of UKPN.

(7) Nothing in sub-paragraph (6) authorises the undertaker to execute the placing, installation, bedding, packing, removal, connection or disconnection of any apparatus, or execute any filling around the apparatus (where the apparatus is laid in a trench) within 300 millimetres of the apparatus.

7.—(1) Where, in accordance with the provisions of this part of this Schedule, the undertaker affords to UKPN facilities and rights for the construction and maintenance in land of the undertaker of alternative apparatus in substitution for apparatus to be removed, those facilities and rights must be granted upon such terms and conditions as may be agreed between the undertaker and UKPN or in default of agreement settled by arbitration in accordance with article 35 (arbitration).

(2) If the facilities and rights to be afforded by the undertaker in respect of any alternative apparatus, and the terms and conditions subject to which those facilities and rights are to be granted, are in the opinion of the arbitrator less favourable on the whole to UKPN than the facilities and rights enjoyed by it in respect of the apparatus to be removed and the terms and conditions to which those facilities and rights are subject, the arbitrator must make such provision for the payment of compensation by the undertaker to UKPN as appears to the arbitrator to be reasonable having regard to all the circumstances of the particular case.

8.—(1) Not less than 28 days before starting the execution of any works in, on or under any land purchased, held, appropriated or used under this Order that are near to, or will or may affect, any apparatus the removal of which has not been required by the undertaker under paragraph 6(2), the undertaker must submit to UKPN a plan, section and description of the works to be executed.

(2) Those works must be executed only in accordance with the plan, section and description submitted under sub-paragraph (1) and in accordance with such reasonable requirements as may be made in accordance with sub-paragraph (3) by UKPN for the alteration or otherwise for the protection of the apparatus, or for securing access to it, and UKPN is entitled to watch and inspect the execution of those works.

(3) Any requirements made by UKPN under sub-paragraph (2) must be made within a period of 21 days beginning with the date on which a plan, section and description under sub-paragraph (1) are submitted to it.

(4) If UKPN in accordance with sub-paragraph (3) and in consequence of the works proposed by the undertaker, reasonably requires the removal of any apparatus and gives written notice to the undertaker of that requirement, paragraphs 6 and 7 apply as if the removal of the apparatus had been required by the undertaker under paragraph 6(2).

(5) Nothing in this paragraph precludes the undertaker from submitting at any time or from time to time, but in no case less than 28 days before commencing the execution of any works, a new plan, section and description instead of the plan, section and description previously submitted, and having done so the provisions of this paragraph apply to and in respect of the new plan, section and description.

(6) The undertaker is not required to comply with sub-paragraph (1) in a case of emergency but in that case it must give to UKPN notice as soon as is reasonably practicable and a plan, section and description of those works as soon as reasonably practicable subsequently and must comply with sub-paragraph (2) in so far as is reasonably practicable in the circumstances.

9.—(1) Subject to the following provisions of this paragraph, the undertaker must repay to UKPN the reasonable expenses incurred by UKPN in, or in connection with, the inspection, removal, alteration or protection of any apparatus or the construction of any new apparatus which may be required in consequence of the execution of any such works as are referred to in paragraph 6(2).

(2) There is to be deducted from any sum payable under sub-paragraph (1) the value of any apparatus removed under the provisions of this part of this Schedule, that value being calculated after removal.

(3) If in accordance with the provisions of this part of this Schedule—

- (a) apparatus of better type, of greater capacity or of greater dimensions is placed in substitution for existing apparatus of worse type, of smaller capacity or of smaller dimensions; or
- (b) apparatus (whether existing apparatus or apparatus substituted for existing apparatus) is placed at a depth greater than the depth at which the existing apparatus was,

and the placing of apparatus of that type or capacity or of those dimensions or the placing of apparatus at that depth, as the case may be, is not agreed by the undertaker or, in default of agreement, is not determined by arbitration in accordance with article 35 (arbitration) to be necessary, then, if such placing involves cost in the construction of works under this part of this Schedule exceeding that which would have been involved if the apparatus placed had been of the existing type, capacity or dimensions, or at the existing depth, as the case may be, the amount which apart from this sub-paragraph would be payable to UKPN by virtue of sub-paragraph (1) is to be reduced by the amount of that excess.

(4) For the purposes of sub-paragraph (3)—

- (a) an extension of apparatus to a length greater than the length of existing apparatus is not to be treated as a placing of apparatus of greater dimensions than those of the existing apparatus where such extension is required in consequence of the execution of any such works as are referred to in paragraph 6(2); and
- (b) where the provision of a joint in a cable is agreed, or is determined to be necessary, the consequential provision of a jointing chamber or of a manhole is to be treated as if it also had been agreed or had been so determined.

(5) An amount which apart from this sub-paragraph would be payable to UKPN in respect of works by virtue of sub-paragraph (1), if the works include the placing of apparatus provided in substitution for apparatus placed more than 7 years and 6 months earlier so as to confer on UKPN any financial benefit by deferment of the time for renewal of the apparatus in the ordinary course, is to be reduced by the amount which represents that benefit.

10.—(1) Subject to sub-paragraphs (2) and (3), if by reason or in consequence of the construction of any of the works referred to in paragraph 6(2), any damage is caused to any apparatus (other than apparatus the repair of which is not reasonably necessary in view of its intended removal for the purposes of those works) or property of UKPN, or there is any interruption in any service provided, or in the supply of any goods, by UKPN, the undertaker must—

- (a) bear and pay the cost reasonably incurred by UKPN in making good such damage or restoring the supply; and
- (b) indemnify UKPN for any other expenses, loss, demands, proceedings, damages, claims, penalty or costs incurred by or recovered from UKPN,

by reason or in consequence of any such damage or interruption.

(2) Nothing in sub-paragraph (1) imposes any liability on the undertaker with respect to any damage or interruption to the extent that it is attributable to the act, neglect or default of UKPN, its officers, servants, contractors or agents.

(3) UKPN must give the undertaker reasonable notice of any such claim or demand and no settlement or compromise is to be made without the consent of the undertaker which, if it withholds such consent, has the sole conduct of any settlement or compromise or of any proceedings necessary to resist the claim or demand.

11. Nothing in this part of this Schedule affects the provisions of any enactment or agreement regulating the relations between the undertaker and UKPN in respect of any apparatus laid or erected in land belonging to the undertaker on the date on which this Order is made.

12. Any difference under this Part of this Schedule must, unless otherwise agreed in writing between the undertaker and UKPN, be determined by arbitration in accordance with article 35 (arbitration).

DEEMED MARINE LICENCE UNDER THE 2009 ACT

PART 1

LICENSED MARINE ACTIVITIES

1.—(1) In this licence—

“the 2009 Act” means the Marine and Coastal Access Act 2009;

“authorised deposits” means the substances and articles specified in paragraph 3 of Part 1 of this licence;

“authorised development” means the development and associated development described in Part 1 of Schedule 1 (authorised development) of the Order;

“authorised development” means works described in paragraph 2(1)(a) of Part 1 of this licence or any part of those works;

“commence” means the first carrying out of any licensed marine activities authorised by this marine licence;

“condition” means a condition in Part 2 of this licence;

“environmental statement” means the document certified as the environmental statement by the Secretary of State for the purposes of the Order;

“existing flood defence” means the existing bund and integrated infrastructure located beneath the path known as the Saxon Shore Way and to the north and west of the authorised development;

“LAT” means lowest astronomical tide;

“licensed activities” means the activities specified in Part 1 of this licence;

“MMO” means the body created under the 2009 Act which is responsible for the monitoring and enforcement of this licence;

“the location, order limits and grid coordinates plan” means the plan certified as the location, order limits and grid coordinates plan by the Secretary of State for the purposes of the Order under article 34 (certification of plans and documents, etc.);

“MHWS” means the highest level which spring tides reach on average over a period of time;

“Order” means the Cleve Hill Solar Park Order 20[];

“undertaker” means Cleve Hill Solar Park Limited (company number 08904850);

“Work No. 9” means the work of that description in Schedule 1 of the Order; and

“works plan” means the plan certified as the works plan by the Secretary of State for the purposes of the Order.

(2) A reference to any statute, order, regulation or similar instrument is construed as a reference to a statute, order, regulation or instrument as amended by any subsequent statute, order, regulation or instrument or as contained in any subsequent re-enactment.

(3) Unless otherwise indicated—

(a) all times are taken to be Greenwich Mean Time (GMT); and

(b) all co-ordinates are taken to be latitude and longitude degrees and minutes to two decimal places.

(4) Except where otherwise notified in writing by the MMO, notices to the MMO must be sent to—

(a) Marine Management Organisation

Marine Licensing
Lancaster House
Newcastle Business Park
Newcastle upon Tyne
NE4 7YH
Tel: 0300 123 1032; and

- (b) Marine Management Organisation (local office)
Fish Market
Rock-A-Nore Road
Hastings
East Sussex
TN34 3DW

Details of licensed marine activities

2.—(1) Subject to the licence conditions, this licence authorises the undertaker (and any agent or contractor acting on their behalf) to carry out the following licensable marine activities under section 66(1) (licensable marine activities) of the 2009 Act—

- (a) form part of, or are related to, the authorised development; and
- (b) are not exempt from requiring a marine licence by virtue of any provision made under section 74 of the 2009 Act.

(2) Such activities are authorised in relation to—

Work No.9— works to maintain the existing flood defence, comprising—

- (a) inspection;
- (b) investigation (above MHWS, inclusive of trial pitting);
- (c) replacement of expansion joint material;
- (d) concrete repair (to a standard specified in BS EN 1504);
- (e) replacement of concrete toe beam;
- (f) vegetation management (including grass cutting and removal of larger vegetation);
- (g) replacement of loose and missing block work;
- (h) repair of voids;
- (i) fencing repair and replacement;
- (j) servicing outfalls;
- (k) cleaning outfall ancillary structures;
- (l) topping up of embankment crest levels at localised low spots;
- (m) vermin control;
- (n) repairs of rutting in crest;
- (o) repointing of jointed structures;
- (p) replacing modular blocks;
- (q) replacement of toe armour as required;
- (r) reinstatement of timber toe piles;
- (s) timber groyne plank replacement;
- (t) replacement of bolts on groyne;
- (u) placement of timber rubbing boards on groyne;
- (v) localised movements of beach material;

- (w) cleaning/dredging of drainage ditch channels;
- (x) replacement of pitching where present;
- (y) replacement of access structures;
- (z) painting; and
- (aa) any other activities required to be undertaken which—
 - (i) use the same materials as those on the existing flood defence;
 - (ii) do not alter the plan form or cross section of the existing flood defence;
 - (iii) do not provide an overall increase or reduction in flood level; and
 - (iv) do not require excavations of beach material deeper than 1.5 metres.

3. The substances or articles authorised for deposit at sea include—

- (a) iron and steel, copper and aluminium;
- (b) stone and rock;
- (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.

4. The grid coordinates for that part of the authorised development comprising Work No. 9 are specified below and more particularly on the location, order limits and grid coordinates plan—

| <i>Point ID</i> | <i>Latitude (DMS)</i> | <i>Longitude (DMS)</i> | <i>Point ID</i> | <i>Latitude (DMS)</i> | <i>Longitude (DMS)</i> |
|-----------------|-----------------------|------------------------|-----------------|-----------------------|------------------------|
| 1 | 51° 19' 56.946" N | 0° 54' 46.089" E | 100 | 51° 20' 32.408" N | 0° 54' 7.763" E |
| 2 | 51° 19' 58.535" N | 0° 54' 45.298" E | 101 | 51° 20' 33.143" N | 0° 54' 9.545" E |
| 3 | 51° 19' 58.708" N | 0° 54' 45.201" E | 102 | 51° 20' 34.285" N | 0° 54' 13.532" E |
| 4 | 51° 19' 59.027" N | 0° 54' 45.080" E | 103 | 51° 20' 35.087" N | 0° 54' 17.689" E |
| 5 | 51° 19' 59.384" N | 0° 54' 44.724" E | 104 | 51° 20' 35.317" N | 0° 54' 21.662" E |
| 6 | 51° 19' 59.960" N | 0° 54' 44.350" E | 105 | 51° 20' 37.215" N | 0° 54' 36.902" E |
| 7 | 51° 20' 1.300" N | 0° 54' 43.858" E | 106 | 51° 20' 37.791" N | 0° 54' 38.342" E |
| 8 | 51° 20' 2.911" N | 0° 54' 42.665" E | 107 | 51° 20' 37.114" N | 0° 54' 46.675" E |
| 9 | 51° 20' 3.116" N | 0° 54' 42.384" E | 108 | 51° 20' 37.181" N | 0° 54' 46.705" E |
| 10 | 51° 20' 4.788" N | 0° 54' 40.819" E | 109 | 51° 20' 37.035" N | 0° 54' 49.041" E |
| 11 | 51° 20' 4.959" N | 0° 54' 40.563" E | 110 | 51° 20' 36.955" N | 0° 54' 49.652" E |
| 12 | 51° 20' 5.438" N | 0° 54' 40.227" E | 111 | 51° 20' 36.954" N | 0° 54' 49.874" E |
| 13 | 51° 20' 6.231" N | 0° 54' 38.746" E | 112 | 51° 20' 36.983" N | 0° 54' 50.130" E |
| 14 | 51° 20' 6.637" N | 0° 54' 38.090" E | 113 | 51° 20' 36.985" N | 0° 54' 50.419" E |
| 15 | 51° 20' 7.311" N | 0° 54' 36.551" E | 114 | 51° 20' 36.920" N | 0° 54' 50.652" E |
| 16 | 51° 20' 7.817" N | 0° 54' 35.012" E | 115 | 51° 20' 37.006" N | 0° 54' 51.158" E |
| 17 | 51° 20' 8.559" N | 0° 54' 30.512" E | 116 | 51° 20' 37.215" N | 0° 54' 50.375" E |
| 18 | 51° 20' 8.713" N | 0° 54' 28.690" E | 117 | 51° 20' 37.673" N | 0° 54' 46.063" E |
| 19 | 51° 20' 8.886" N | 0° 54' 27.093" E | 118 | 51° 20' 38.109" N | 0° 54' 39.463" E |
| 20 | 51° 20' 8.229" N | 0° 54' 29.798" E | 119 | 51° 20' 36.284" N | 0° 54' 26.251" E |
| 21 | 51° 20' 7.773" N | 0° 54' 32.964" E | 120 | 51° 20' 35.445" N | 0° 54' 16.667" E |
| 22 | 51° 20' 6.916" N | 0° 54' 36.190" E | 121 | 51° 20' 34.876" N | 0° 54' 13.691" E |
| 23 | 51° 20' 5.271" N | 0° 54' 39.948" E | 122 | 51° 20' 33.400" N | 0° 54' 8.742" E |

| | | | | | |
|----|-------------------|------------------|-----|-------------------|------------------|
| 24 | 51° 20' 1.514" N | 0° 54' 43.309" E | 123 | 51° 20' 32.885" N | 0° 54' 7.478" E |
| 25 | 51° 19' 59.852" N | 0° 54' 43.782" E | 124 | 51° 20' 32.714" N | 0° 54' 5.934" E |
| 26 | 51° 20' 11.941" N | 0° 54' 13.217" E | 125 | 51° 20' 32.081" N | 0° 54' 3.003" E |
| 27 | 51° 20' 11.877" N | 0° 54' 12.095" E | 126 | 51° 20' 36.869" N | 0° 54' 51.672" E |
| 28 | 51° 20' 11.663" N | 0° 54' 10.398" E | 127 | 51° 20' 36.819" N | 0° 54' 51.640" E |
| 29 | 51° 20' 11.436" N | 0° 54' 9.385" E | 128 | 51° 20' 36.762" N | 0° 54' 51.642" E |
| 30 | 51° 20' 10.399" N | 0° 54' 6.406" E | 129 | 51° 20' 36.711" N | 0° 54' 51.724" E |
| 31 | 51° 20' 10.522" N | 0° 54' 7.338" E | 130 | 51° 20' 36.674" N | 0° 54' 51.969" E |
| 32 | 51° 20' 10.085" N | 0° 53' 46.895" E | 131 | 51° 20' 36.662" N | 0° 54' 52.243" E |
| 33 | 51° 20' 10.324" N | 0° 53' 47.052" E | 132 | 51° 20' 36.643" N | 0° 54' 52.308" E |
| 34 | 51° 20' 10.497" N | 0° 53' 47.265" E | 133 | 51° 20' 36.557" N | 0° 54' 52.486" E |
| 35 | 51° 20' 10.555" N | 0° 53' 47.377" E | 134 | 51° 20' 36.597" N | 0° 54' 52.469" E |
| 36 | 51° 20' 10.609" N | 0° 53' 47.678" E | 135 | 51° 20' 36.651" N | 0° 54' 52.486" E |
| 37 | 51° 20' 10.685" N | 0° 53' 56.589" E | 136 | 51° 20' 42.418" N | 0° 55' 36.744" E |
| 38 | 51° 20' 10.577" N | 0° 53' 57.633" E | 137 | 51° 20' 42.431" N | 0° 55' 37.288" E |
| 39 | 51° 20' 10.677" N | 0° 53' 57.274" E | 138 | 51° 20' 42.700" N | 0° 55' 40.210" E |
| 40 | 51° 20' 10.741" N | 0° 53' 56.919" E | 139 | 51° 20' 42.775" N | 0° 55' 40.607" E |
| 41 | 51° 20' 10.759" N | 0° 53' 56.703" E | 140 | 51° 20' 42.916" N | 0° 55' 40.911" E |
| 42 | 51° 20' 10.691" N | 0° 53' 47.644" E | 141 | 51° 20' 42.913" N | 0° 55' 41.691" E |
| 43 | 51° 20' 10.658" N | 0° 53' 47.286" E | 142 | 51° 20' 43.090" N | 0° 55' 42.369" E |
| 44 | 51° 20' 10.631" N | 0° 53' 47.191" E | 143 | 51° 20' 43.208" N | 0° 55' 42.254" E |
| 45 | 51° 20' 10.417" N | 0° 53' 46.970" E | 144 | 51° 20' 43.241" N | 0° 55' 43.046" E |
| 46 | 51° 20' 10.380" N | 0° 53' 46.880" E | 145 | 51° 20' 43.362" N | 0° 55' 43.772" E |
| 47 | 51° 20' 10.348" N | 0° 53' 46.718" E | 146 | 51° 20' 43.555" N | 0° 55' 43.598" E |
| 48 | 51° 20' 10.380" N | 0° 53' 46.503" E | 147 | 51° 20' 43.523" N | 0° 55' 44.092" E |
| 49 | 51° 20' 10.447" N | 0° 53' 46.302" E | 148 | 51° 20' 43.570" N | 0° 55' 44.669" E |
| 50 | 51° 20' 27.907" N | 0° 53' 46.744" E | 149 | 51° 20' 43.671" N | 0° 55' 45.270" E |
| 51 | 51° 20' 27.862" N | 0° 53' 47.043" E | 150 | 51° 20' 43.799" N | 0° 55' 45.070" E |
| 52 | 51° 20' 27.876" N | 0° 53' 47.230" E | 151 | 51° 20' 43.780" N | 0° 55' 45.567" E |
| 53 | 51° 20' 27.830" N | 0° 53' 47.672" E | 152 | 51° 20' 43.948" N | 0° 55' 46.756" E |
| 54 | 51° 20' 27.699" N | 0° 53' 48.253" E | 153 | 51° 20' 44.306" N | 0° 55' 48.368" E |
| 55 | 51° 20' 27.585" N | 0° 53' 48.411" E | 154 | 51° 20' 44.687" N | 0° 55' 49.791" E |
| 56 | 51° 20' 27.555" N | 0° 53' 48.435" E | 155 | 51° 20' 45.757" N | 0° 55' 54.594" E |
| 57 | 51° 20' 27.538" N | 0° 53' 48.625" E | 156 | 51° 20' 47.241" N | 0° 56' 2.207" E |
| 58 | 51° 20' 27.517" N | 0° 53' 48.660" E | 157 | 51° 20' 47.983" N | 0° 56' 6.651" E |
| 59 | 51° 20' 27.406" N | 0° 53' 48.710" E | 158 | 51° 20' 48.152" N | 0° 56' 6.491" E |
| 60 | 51° 20' 27.376" N | 0° 53' 48.744" E | 159 | 51° 20' 48.092" N | 0° 56' 6.958" E |
| 61 | 51° 20' 27.358" N | 0° 53' 48.805" E | 160 | 51° 20' 48.096" N | 0° 56' 7.304" E |
| 62 | 51° 20' 27.357" N | 0° 53' 48.852" E | 161 | 51° 20' 48.226" N | 0° 56' 7.918" E |
| 63 | 51° 20' 27.320" N | 0° 53' 49.159" E | 162 | 51° 20' 48.436" N | 0° 56' 7.698" E |
| 64 | 51° 20' 27.275" N | 0° 53' 49.275" E | 163 | 51° 20' 48.394" N | 0° 56' 8.208" E |
| 65 | 51° 20' 27.252" N | 0° 53' 49.310" E | 164 | 51° 20' 48.416" N | 0° 56' 8.607" E |
| 66 | 51° 20' 27.112" N | 0° 53' 49.343" E | 165 | 51° 20' 48.474" N | 0° 56' 8.816" E |
| 67 | 51° 20' 27.084" N | 0° 53' 49.434" E | 166 | 51° 20' 48.520" N | 0° 56' 8.981" E |
| 68 | 51° 20' 27.059" N | 0° 53' 49.665" E | 167 | 51° 20' 48.530" N | 0° 56' 9.101" E |
| 69 | 51° 20' 27.036" N | 0° 53' 49.798" E | 168 | 51° 20' 48.516" N | 0° 56' 9.227" E |
| 70 | 51° 20' 26.925" N | 0° 53' 50.097" E | 169 | 51° 20' 48.514" N | 0° 56' 9.358" E |
| 71 | 51° 20' 26.949" N | 0° 53' 50.133" E | 170 | 51° 20' 48.592" N | 0° 56' 9.802" E |

| | | | | | |
|----|-------------------|------------------|-----|-------------------|------------------|
| 72 | 51° 20' 27.049" N | 0° 53' 49.908" E | 171 | 51° 20' 48.676" N | 0° 56' 10.128" E |
| 73 | 51° 20' 27.113" N | 0° 53' 49.705" E | 172 | 51° 20' 48.616" N | 0° 56' 7.869" E |
| 74 | 51° 20' 27.164" N | 0° 53' 49.465" E | 173 | 51° 20' 48.857" N | 0° 56' 14.026" E |
| 75 | 51° 20' 27.246" N | 0° 53' 49.429" E | 174 | 51° 20' 48.852" N | 0° 56' 14.100" E |
| 76 | 51° 20' 27.272" N | 0° 53' 49.410" E | 175 | 51° 20' 48.844" N | 0° 56' 14.168" E |
| 77 | 51° 20' 27.326" N | 0° 53' 49.330" E | 176 | 51° 20' 48.807" N | 0° 56' 14.326" E |
| 78 | 51° 20' 27.347" N | 0° 53' 49.270" E | 177 | 51° 20' 48.722" N | 0° 56' 14.640" E |
| 79 | 51° 20' 27.374" N | 0° 53' 49.080" E | 178 | 51° 20' 48.645" N | 0° 56' 15.364" E |
| 80 | 51° 20' 27.403" N | 0° 53' 48.953" E | 179 | 51° 20' 48.916" N | 0° 56' 17.077" E |
| 81 | 51° 20' 27.459" N | 0° 53' 48.796" E | 180 | 51° 20' 44.526" N | 0° 56' 52.481" E |
| 82 | 51° 20' 27.534" N | 0° 53' 48.775" E | 181 | 51° 20' 44.523" N | 0° 56' 53.111" E |
| 83 | 51° 20' 27.577" N | 0° 53' 48.731" E | 182 | 51° 20' 44.613" N | 0° 56' 53.520" E |
| 84 | 51° 20' 27.605" N | 0° 53' 48.666" E | 183 | 51° 20' 44.607" N | 0° 56' 53.654" E |
| 85 | 51° 20' 27.622" N | 0° 53' 48.491" E | 184 | 51° 20' 44.472" N | 0° 56' 54.152" E |
| 86 | 51° 20' 27.695" N | 0° 53' 48.408" E | 185 | 51° 20' 44.365" N | 0° 56' 54.631" E |
| 87 | 51° 20' 27.763" N | 0° 53' 48.293" E | 186 | 51° 20' 44.337" N | 0° 56' 54.961" E |
| 88 | 51° 20' 27.942" N | 0° 53' 47.338" E | 187 | 51° 20' 44.341" N | 0° 56' 55.338" E |
| 89 | 51° 20' 27.948" N | 0° 53' 47.235" E | 188 | 51° 20' 44.188" N | 0° 56' 56.399" E |
| 90 | 51° 20' 27.910" N | 0° 53' 47.165" E | 189 | 51° 20' 44.193" N | 0° 56' 56.709" E |
| 91 | 51° 20' 27.920" N | 0° 53' 47.052" E | 190 | 51° 20' 44.268" N | 0° 56' 57.174" E |
| 92 | 51° 20' 27.939" N | 0° 53' 46.941" E | 191 | 51° 20' 49.033" N | 0° 56' 20.247" E |
| 93 | 51° 20' 27.963" N | 0° 53' 46.853" E | 192 | 51° 20' 48.835" N | 0° 56' 14.262" E |
| 94 | 51° 20' 27.997" N | 0° 53' 46.798" E | 193 | 51° 20' 48.854" N | 0° 56' 14.137" E |
| 95 | 51° 20' 30.414" N | 0° 53' 56.932" E | 194 | 51° 20' 48.859" N | 0° 56' 14.060" E |
| 96 | 51° 20' 30.486" N | 0° 53' 58.149" E | 195 | 51° 20' 47.432" N | 0° 56' 30.037" E |
| 97 | 51° 20' 30.389" N | 0° 53' 58.557" E | 196 | 51° 20' 47.356" N | 0° 56' 30.457" E |
| 98 | 51° 20' 31.727" N | 0° 54' 3.734" E | 197 | 51° 20' 46.743" N | 0° 56' 35.249" E |
| 99 | 51° 20' 32.193" N | 0° 54' 5.976" E | 198 | 51° 20' 46.536" N | 0° 56' 37.296" E |

5. The provisions of section 72 (variation, suspension, revocation and transfer) of the 2009 Act apply to this licence except that the provisions of section 72(7) relating to the transfer of the licence only apply to a transfer not falling within article 5 (benefit of the Order).

6. With respect to any condition which requires the licensed activities be carried out in accordance with the plans, protocols or statements approved under this Schedule, the approved details, plan or project are taken to include any amendments that may subsequently be approved in writing by the MMO.

7. Any amendments to or variations from the approved details must be in accordance with the principles and assessments set out in the environmental statement. Such agreement may only be given in relation to immaterial changes where it has been demonstrated to the satisfaction of the relevant planning authority or that other person that the subject matter of the agreement sought is unlikely to give rise to any materially new or materially different environmental effects from those assessed in the environmental statement.

PART 2

CONDITIONS

Notifications regarding licensed activities

1. The licence holder must inform the MMO in writing of the commencement of the first licensed activity at least 24 hours prior to such commencement.

2.—(1) The licence holder must inform the MMO of the name and function of any agent or contractor appointed to engage in any licensed activity not less than 24 hours before the commencement of the licensed activity in question.

(2) Any changes to details supplied under sub-paragraph (1) must be notified to the MMO in writing prior to the agent, contractor or vessel engaging in the licensed activity in question.

(3) Only those persons notified to the MMO in accordance with this condition are permitted to carry out a licensed activity.

3. The licence holder must ensure that a copy of this Schedule has been read and understood by any agents and contractors that will be carrying out any licensed activity on behalf of the licence holder, as notified to the MMO under condition 10.

4. Copies of this Schedule must be available for inspection at the following locations—

- (a) the licence holder's registered office; and
- (b) during the construction of the authorised development only, at any site office which is adjacent to or near the river and which has been provided for the purposes of the construction of the authorised development.

Pollution prevention

5. The licence holder must—

- (a) not discharge waste concrete slurry or wash water from concrete, or cement into the marine environment, and where practicable, site concrete and cement mixing and washing areas at least 10 metres away from the marine environment and any surface water drain to minimise the risk of run off entering the marine environment;
- (b) store, handle, transport and use fuels, lubricants, chemicals and other substances so as to prevent releases into the marine environment, including bunding or storage of 110% of the total volume of all reservoirs and containers;
- (c) report any spill of oil, fuel or chemicals into the marine area to the MMO Marine Pollution Response Team (by telephone, within office hours on 0300 200 2024, or outside office hours on 07770 977 825, and at all times, if no response to calls to those numbers, on 0345 051 8486 or via email using dispersants@marinemanagement.org.uk) within 12 hours of the spill occurring;
- (d) store all waste in designated areas that are isolated from surface water drains and open water and are bunded;
- (e) use suitable protective sheeting to prevent dust, debris (including paints and solvents) and rebounded or windblown concrete from entering the water environment, and rebounded material must be cleared away before the sheeting is removed;
- (f) ensure that any coatings and any treatments are suitable for use in the marine environment and are used in accordance with either guidelines approved by the Health and Safety Executive or the Environment Agency;
- (g) not use priority substances and polluting chemicals listed under the Environmental Quality Standards Directive during works.

Post-construction

6. The licence holder must remove all temporary structures, waste and debris associated with the construction activities within 6 weeks following completion of the final construction activity.

Maintenance

7.—(1) Unless otherwise agreed by the MMO, the licenced activities may not commence until a maintenance plan has been approved in writing by the MMO.

(2) The maintenance plan must be submitted at least 6 weeks prior to the commencement of any maintenance activity, and must include details of the maintenance activities required including location, duration, timings, methodology and materials to be used.

(3) Maintenance activities must be undertaken in accordance with the agreed plan.

SCHEDULE 9

Article 35

ARBITRATION RULES

Primary objective

1.—(1) The primary objective of these arbitration rules is to achieve a fair, impartial, final and binding award on the substantive difference between the parties (save as to costs) within 4 months from the date the arbitrator is appointed pursuant to article 35 of the Order.

(2) The arbitration will be deemed to have commenced when a party (“the Claimant”) serves a written notice of arbitration on the other party (“the Respondent”).

Time periods

2.—(1) All time periods in these arbitration rules will be measured in days and this will include weekends, but not bank or public holidays.

(2) Time periods will be calculated from the day after the Arbitrator is appointed which are either—

- (a) the date the arbitrator notifies the parties in writing of his/her acceptance of an appointment by agreement of the parties; or
- (b) the date the arbitrator is appointed by the Secretary of State.

Timetable

3.—(1) The timetable for the arbitration will be that set out in sub-paragraphs (2) to (4) below unless amended in accordance with paragraph 5(3).

(2) Within 14 days of the arbitrator being appointed, the Claimant will provide both the Respondent and the arbitrator with—

- (a) a written Statement of Claim which describes the nature of the difference between the parties, the legal and factual issues, the Claimant’s contentions as to those issues, the amount of its claim and/or the remedy it is seeking;
- (b) all statements of evidence and copies of all documents on which it relies, including contractual documentation, correspondence (including electronic documents), legal precedents and expert witness reports.

(3) Within 14 days of receipt of the Claimant’s statements under sub-paragraph (2) by the arbitrator and Respondent, the Respondent will provide the Claimant and the arbitrator with—

- (a) a written Statement of Defence responding to the Claimant’s Statement of Claim, its statement in respect of the nature of the difference, the legal and factual issues in the Claimant’s claim, its acceptance of any element(s) of the Claimant’s claim, its contentions as to those elements of the Claimant’s claim it does not accept;
- (b) all statements of evidence and copies of all documents on which it relies, including contractual documentation, correspondence (including electronic documents), legal precedents and expert witness reports;
- (c) any objections it wishes to make to the Claimant’s statements, comments on the Claimant’s expert report(s) (if submitted by the Claimant) and explanations for the objections.

(4) Within 7 days of the Respondent serving its statements sub-paragraph (3), the Claimant may make a Statement of Reply by providing both the Respondent and the arbitrator with—

- (a) a written statement responding to the Respondent’s submissions, including its reply in respect of the nature of the difference, the issues (both factual and legal) and its contentions in relation to the issues;

- (b) all statements of evidence and copies of documents in response to the Respondent's submissions;
- (c) any expert report in response to the Respondent's submissions;
- (d) any objections to the statements of evidence, expert reports or other documents submitted by the Respondent;
- (e) its written submissions in response to the legal and factual issues involved.

Procedure

4.—(1) The parties' pleadings, witness statements and expert reports (if any) will be concise. No single pleading will exceed 30 single-sided A4 pages using 10pt Arial font.

(2) The arbitrator will make an award on the substantive difference(s) based solely on the written material submitted by the parties unless the arbitrator decides that a hearing is necessary to explain or resolve any matters.

(3) Either party may, within 2 days of delivery of the last submission, request a hearing giving specific reasons why it considers a hearing is required.

(4) Within 7 days of receiving the last submission, the arbitrator will notify the parties whether a hearing is to be held and the length of that hearing.

(5) Within 10 days of the arbitrator advising the parties that he will hold a hearing, the date and venue for the hearing will be fixed by agreement with the parties, save that if there is no agreement the arbitrator is to direct a date and venue which he considers is fair and reasonable in all the circumstances. The date for the hearing must not be less than 35 days from the date of the arbitrator's direction confirming the date and venue of the hearing.

(6) A decision will be made by the arbitrator on whether there is any need for expert evidence to be submitted orally at the hearing. If oral expert evidence is required by the arbitrator, then any expert(s) attending the hearing may be asked questions by the arbitrator.

(7) There will be no process of examination and cross-examination of experts, but the arbitrator must invite the parties to ask questions of the experts by way of clarification of any answers given by the expert(s) in response to the arbitrator's questions. Prior to the hearing the procedure for the expert(s) will be that—

- (a) at least 28 days before a hearing, the arbitrator will provide a list of issues to be addressed by the expert(s);
- (b) if more than one expert is called, they will jointly confer and produce a joint report or reports within 14 days of the issues being provided; and
- (c) the form and content of a joint report must be as directed by the arbitrator and must be provided at least 7 days before the hearing.

(8) Within 14 days of a Hearing or a decision by the arbitrator that no hearing is to be held the Parties may by way of exchange provide the arbitrator with a final submission in connection with the matters in dispute and any submissions on costs. The arbitrator must take these submissions into account in the Award.

(9) The arbitrator may make other directions or rulings as considered appropriate in order to ensure that the parties comply with the timetable and procedures to achieve an award on the substantive difference within 4 months of the date on which he/she is appointed, unless both parties otherwise agree to an extension to the date for the award.

(10) If a party fails to comply with the timetable, procedure or any other direction then the arbitrator may continue in the absence of a party or submission or document, and may make a decision on the information before him/her attaching the appropriate weight to any evidence submitted beyond any timetable or in breach of any procedure and/or direction.

(11) The arbitrator's award must include reasons. The parties must accept that the extent to which reasons are given must be proportionate to the issues in dispute and the time available to the arbitrator to deliver the award.

Arbitrator's powers

5.—(1) The arbitrator has all the powers of the Arbitration Act 1996, including the non-mandatory sections, save where modified by these Rules.

(2) There must be no discovery or disclosure, except that the arbitrator is to have the power to order the parties to produce such documents as are reasonably requested by another party no later than the Statement of Reply, or by the arbitrator, where the documents are manifestly relevant, specifically identified and the burden of production is not excessive. Any application and orders should be made by way of a Redfern Schedule without any hearing.

(3) Any time limits fixed in accordance with this procedure or by the arbitrator may be varied by agreement between the parties, subject to any such variation being acceptable to and approved by the arbitrator. In the absence of agreement, the arbitrator may vary the timescales and/or procedure—

- (a) if the arbitrator is satisfied that a variation of any fixed time limit is reasonably necessary to avoid a breach of the rules of natural justice and then;
- (b) only for such a period that is necessary to achieve fairness between the parties.

(4) On the date the award is made, the arbitrator will notify the parties that the award is completed, signed and dated, and that it will be issued to the parties on receipt of cleared funds for the arbitrator's fees and expenses.

Costs

6.—(1) The costs of the arbitration must include the fees and expenses of the arbitrator, the reasonable fees and expenses of any experts and the reasonable legal and other costs incurred by the parties for the arbitration.

(2) Where the difference involves connected/interrelated issues, the arbitrator will consider the relevant costs collectively.

(3) The final award must fix the costs of the arbitration and decide which of the parties are to bear them or in what proportion they are to be borne by the parties.

(4) The arbitrator will award recoverable costs on the general principle that each party should bear its own costs, having regard to all material circumstances, including such matters as exaggerated claims and/or defences, the degree of success for different elements of the claims, claims that have incurred substantial costs, the conduct of the parties and the degree of success of a party.

Confidentiality

7.—(1) The parties agree that any hearings in this arbitration are to take place in private.

(2) The parties and arbitrator agree that any matters, materials, documents, awards, expert reports and the like are confidential and must not be disclosed to any third party without prior written consent of the other party, save for any application to the Courts or where disclosure is required under any legislative or regulatory requirement.

SCHEDULE 10

Article 2

ENVIRONMENTAL STATEMENT SUPPLEMENTS

| <i>Document Title</i> | <i>Date</i> | <i>Examination Reference</i> | <i>Library</i> |
|---|---------------|------------------------------|----------------|
| Climate Change Chapter Clarification Note | June 2019 | REP2-043 | |
| Clarification Note by the Applicant on Glint / Glare Analysis | August 2019 | REP3-022 | |
| Missing ALC Records | August 2019 | REP4-034 | |
| Clarification Note on Development Description Chapter | July 2019 | AS-028 (Appendix E) | |
| Clarification Note - Removal of Northern Access Route Option | November 2019 | AS-048 | |

EXPLANATORY NOTE

(This note is not part of the Order)

This Order grants development consent for, and authorises the construction, operation and maintenance of a solar generating station and energy storage facility on land on the north Kent coast approximately 2 km north east of Faversham and 5 km west of Whitstable together with associated development. This Order imposes requirements in connection with the development and authorises the compulsory purchase of land (including rights in land) and the right to use land and to override easements and other rights.

This Order also grants a deemed marine licence under Part 4 of the Marine and Coastal Access Act 2009 in connection with the solar park. The marine licence imposes conditions in connection with the deposits and works for which they grant consent.

A copy of the plans and book of reference referred to in this Order and certified in accordance with article 34 (certification of plans and documents, etc.) may be inspected free of charge at the offices of Cleve Hill Solar Park Ltd at Woodington House Woodington Road, East Wellow, Romsey, Hampshire, SO51 6DQ.

**APPENDIX C(ii): INDICATIVE DRAFT AMENDMENT
TO REQUIREMENT 2 OF THE DCO**

Earlier in our report, at paragraphs 4.8.15 to 4.8.24, 10.2.10, 12.3.20 and 12.3.21, we expressed the view that there was a remote possibility that the Proposed Development could be built outside the assessed parameters. In the final analysis we were content that the Applicant had provided sufficient reassurance that any potential differences between details required by the Recommended DCO and the assessed parameters would not be of sufficient consequence to have a material impact on the significance of effects. On that basis, we have not recommended any changes to this aspect of the Applicant's dDCO.

However, if the SoS has any residual concerns on this point, we offer the following amendment to Requirement 2:

(2) the details submitted must be in accordance with –

(a) the location, order limits and grid coordinates plan;

(b) the works plan;

(c) the principles and assessments set out in the environmental statement and the outline design principles, or such variation thereof as may be approved by the relevant planning authority pursuant to Requirement 19.

APPENDIX 4: COPY OF EMAIL FROM NORTH LINCOLNSHIRE COUNCIL DATED 14 MAY 2021

Gareth Roberts

From: Andrew Law [REDACTED]@northlincs.gov.uk>
Sent: 14 May 2021 08:47
To: Gareth Roberts
Subject: RE: Little Crow - Site Visit Itinerary for Inspector & ExA Q1

Der Gareth,

Thank you for the update.

I do not think that we have any survey data regarding the use of the footpath as I had already discussed this matter with our PROW officer prior to ISH1; however I have consulted our PROW officer on this question and will chase for a response and provide confirmation asap.

With regards to cumulative effects, I have checked our system in advance of drafting a response to this question and have not identified any additional developments that need to be added.

Kind Regards

Andrew Law
Development Management Specialist

Development Management
North Lincolnshire Council
30-40 High Street
SCUNTHORPE
DN15 6NL

From: Gareth Roberts [REDACTED]@pegasusgroup.co.uk>
Sent: 14 May 2021 08:42
To: Andrew Law [REDACTED]@northlincs.gov.uk>
Cc: Colin Virtue [REDACTED]@pegasusgroup.co.uk>; Henri Scanlon [REDACTED]@pegasusgroup.co.uk>
Subject: RE: Little Crow - Site Visit Itinerary for Inspector & ExA Q1

Dear Andrew

Site visit Itinerary

Just to update you, we added your recommended location onto our site visit itinerary.

ExA Q1

Turning to the ExA Q1, question 1.4.2, does the Council have any counts or survey data relating to the use of footpath 214. The applicant hasn't undertaken any specific survey counts along this footpath so provisionally, the Council may be best placed to answer this question?

Moving on to question 1.1.10, have you now identified any other developments which should have been included in the assessment of cumulative effects?

A swift response on the matters raised above would be appreciated.

Kind regards

Gareth Roberts
Director

Pegasus Group

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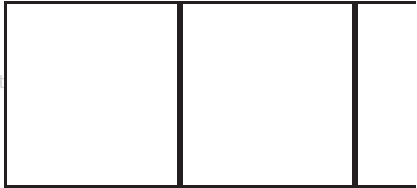
T 01454 625945 | E [REDACTED]@pegasusgroup.co.uk

[REDACTED] | EXT 2019

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From: Andrew Law [REDACTED]@northlincs.gov.uk>
Sent: 30 April 2021 11:56
To: Gareth Roberts [REDACTED]@pegasusgroup.co.uk>
Subject: RE: Little Crow - Site Visit Itinerary for Inspector

Hi Gareth,

Thanks for the update.

I will have a closer look before I produce my response for the inspector, but the points suggested appear logical. The only additional point I was going to suggest was that the inspector may wish to visit the section of the opencast way that already runs through the adjacent solar park as it is a good comparison to this scheme (not sure if this is what is referred to at point 5 of your plan?).

In addition – could you just give me a quick update on where we are with the SoCG, I had confirmed agreement to the draft via email to Colin and just want to make sure you are not waiting for anything further from me at this time (my inbox is filling quicker than I can respond so I am a little behind on emails). Is there a final version for review and signing yet?

Kind Regards

Andrew Law
Development Management Specialist

Development Management
North Lincolnshire Council
30-40 High Street
SCUNTHORPE
DN15 6NL



From: Gareth Roberts [redacted] <[\[redacted\]@pegasusgroup.co.uk](mailto:[redacted]@pegasusgroup.co.uk)>
Sent: 30 April 2021 11:43
To: Andrew Law [redacted] <[\[redacted\]@northlincs.gov.uk](mailto:[redacted]@northlincs.gov.uk)>
Cc: Colin Virtue [redacted] <[\[redacted\]@pegasusgroup.co.uk](mailto:[redacted]@pegasusgroup.co.uk)>
Subject: Little Crow - Site Visit Itinerary for Inspector

Dear Andrew

I attach for your observations a draft of our suggested site visit itinerary for the Inspector. We need to submit a final version by Deadline 1 – 10 May.

Also, please shout if you need to go to site and we shall arrange access for you.

Kind regards

Gareth Roberts
Director

Pegasus Group

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APPENDIX 5: IEMA'S GUIDE MAJOR ACCIDENTS AND DISASTERS IN EIA: A PRIMER

Major Accidents and Disasters in EIA: A Primer

September 2020



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Context, aims and audience

What is a major accidents and/or disasters assessment?

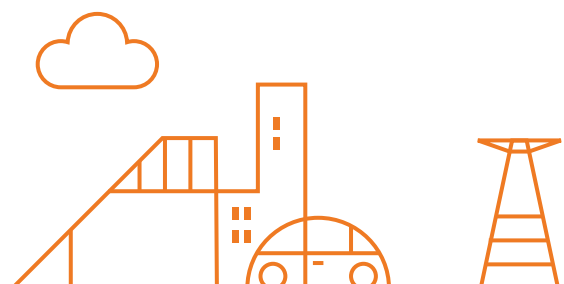
- The topic was introduced into the UK Environmental Impact Assessment (EIA) Regulations as a result of EU Directive 2014/52/EU (the EIA Directive).
- It covers the assessment of potentially significant adverse effects of a development on the environment deriving from its vulnerability to risks of relevant major accidents and/or disasters.
- A major accident is an event (for instance, train derailment or major road traffic accident) that threatens immediate or delayed serious environmental effects to human health, welfare and/or the environment and requires the use of resources beyond those of the client or its appointed representatives (i.e. contractors) to manage.
- Major accidents can be caused by disasters resulting from both man-made and natural hazards.
- A disaster is a man-made/external hazard (such as an act of terrorism) or a natural hazard (such as an earthquake) with the potential to cause an event or situation that meets the definition of a major accident.
- In general, major accidents and/or disasters should be considered as part of an assessment where the development has the potential to cause the loss of life, permanent injury and/or temporary or permanent destruction of an environmental receptor which cannot be restored through minor clean-up and restoration.

What does this primer aim to provide?

- This primer aims to increase awareness of the major accidents and/or disasters EIA topic and its application.
- It offers an assessment methodology based on known current practice within the UK to date and identifies key terminology that can be used.
- It has been structured around a typical assessment approach and offers a proportionate method for considering major accidents and/or disasters through screening, scoping and assessment.
- It has been developed to generate comment and discussion, from which future guidance and institutional and regulatory change can evolve over time.

Who is this primer aimed at?

- The intended audience of this primer is impact assessment practitioners and those with an interest in improving working practice and awareness across impact assessment.
- It is assumed that the reader has basic knowledge of EIA in the UK. Further information on EIA more generally can be found within IEMA's resources.



Key terminology

Key terms used in this primer are set out below. Supplementary terminology, including sources from which the below has been drawn, is presented in Appendix A.

| Key term | Definition |
|---|--|
| Adaptive capacity | The capacity of receptors to adjust to potential damage, to take advantage of opportunities, or to respond to consequences. |
| As low as reasonably practicable (ALARP) | Involves weighing a risk against the trouble, time and money needed to control it. Thus, ALARP describes the level to which we expect to see risks controlled. |
| Disaster | May be a natural hazard (e.g. earthquake) or a man-made/external hazard (e.g. act of terrorism) with the potential to cause an event or situation that meets the definition of a major accident. |
| Reasonable worst-case scenario | A challenging manifestation of the scenario after highly implausible scenarios are excluded ¹ . |
| Magnitude of impact | The magnitude of an impact is typically defined by the following factors: extent – the area over which an effect occurs; duration – the time for which the effect occurs; frequency – how often the effect occurs; severity – the degree of change relative to existing environmental conditions. |
| Major accident | Events that threaten immediate or delayed serious environmental effects to human health, welfare and/or the environment and require the use of resources beyond those of the client or its appointed representatives to manage. Whilst malicious intent is not accidental, the outcome (e.g. train derailment) may be the same and therefore many mitigation measures will apply to both deliberate and accidental events. |

¹ As defined in: www.gov.uk/government/publications/national-risk-register-for-civil-emergencies-2015-edition/national-risk-register-of-civil-emergencies-chapter-1-main-types-of-civil-emergency

| Key term | Definition |
|-------------------------|---|
| Man-made hazards | For example (but not limited to): structural collapse building collapse human error/management failure design error sabotage/arson aircraft/rail/road/sea or river vessel disaster (crash/derailment/ collision/overloading/hull failure) terrorism cyber-attack industrial/ technological accident explosion (chemical, nuclear or other) pollution (oil, chemical or other) fire conflict displaced population crowd violence and disorder. |
| Natural hazards | For example (but not limited to): earthquake flooding dam collapse volcanic eruption avalanche extreme temperature (heat wave, cold snap) fire ground subsidence tropical storm storm surge landslide animal/insect infestation sandstorm high winds/storm wildfire tsunami/tidal wave drought biological hazard – epidemic, pandemic. |
| Pathway | The route by which the source can reach the receptor. |

| Key term | Definition |
|--|--|
| Receptor | <p>The specific component of the environment that could be adversely affected if the source reaches it.</p> <p>Environmental receptor is specifically defined as: features of the environment that are subject to assessment under Article 3 of the EIA Directive, namely population and human health, biodiversity, land, soil, water, air and climate, material assets, cultural heritage and landscape.</p> |
| Risk | The likelihood of an impact occurring, combined with the effect or consequence(s) of the impact on a receptor if it does occur. |
| Risk Event | An identified, unplanned event, which is considered relevant to the development and has the potential to result in a major accident and/or disaster, subject to assessment of its potential to result in a significant adverse effect on an environmental receptor. |
| Sensitivity | <p>The sensitivity of a receptor is a function of its value, and capacity to accommodate change reflecting its ability to recover if it is affected. It is typically defined by the following factors:</p> <p>Adaptability – the degree to which a receptor can avoid, adapt to or recover from an effect.</p> <p>Tolerance – the ability of a receptor to accommodate temporary or permanent change.</p> <p>Recoverability – the temporal scale over and extent to which a receptor will recover following an effect.</p> |
| Significant environmental effect (in relation to a major accidents and/or disasters assessment) | Could include the loss of life, permanent injury and temporary or permanent destruction of an environmental receptor which cannot be restored through minor clean-up and restoration. |
| Source | The original cause of the hazard, which has the potential to cause harm. |
| Source-pathway-receptor linkage | For a risk to arise there must be hazard that consists of a 'source' (e.g. high rainfall); a 'receptor' (e.g. people, property, environment); and a pathway between the source and the receptor (e.g. flood routes). |
| Vulnerability | <p>Describes the potential for harm as a result of an event, for example due to sensitivity or value of receptors. In the context of the EIA Directive, the term refers to the 'exposure and resilience' of the development to the risk of a major accident and/or disaster.</p> <p>Vulnerability is influenced by sensitivity, adaptive capacity and magnitude of impact.</p> |

Introduction

Major accidents and/or disasters was a new EIA topic introduced by the 2014/52/EU EIA Directive (the EIA Directive). The objective of this primer is to present learning from existing development within the UK where the topic has been assessed, to share best practice and to promote a consistent approach across the general network of EIA professionals. It is not intended to be an introduction to risk management itself, rather to give impact assessment practitioners an introductory working knowledge of the topic and its application, and to stimulate further discussion and debate as the topic evolves.

As this is an emerging topic, this document is intended as a primer only to introduce the concept of the topic and offer an initial appreciation on methodology that could be adopted. It will prompt discussion upon which future guidance, and therefore practice, can evolve. The primer is intended to be updated as experience of the topic develops, and as the methodology is advanced and more widely agreed. There is a huge variance in the scope and extent of development that falls under EIA, and this primer is not intended to mandate a 'one size fits all' approach, nor to suggest one would be appropriate.

This primer aims to communicate the positive process of hazard identification, and avoidance, reduction or mitigation through the EIA process. The methodology outlined offers a transparent platform to communicate to stakeholders how development vulnerabilities to major accidents and/or disasters have been reduced to an acceptable level. As with any topic, the earlier in the process vulnerabilities to major accidents and/or disasters are identified and appraised the greater the likelihood of residual risks being appropriately controlled, and the scope of the EIA remaining proportionate.



Background

The EIA Directive was transposed into UK legislation in 2017, including but not limited to the Town and Country Planning (EIA) Regulations 2017 (devolved between England, Wales, Scotland and Northern Ireland), and the Infrastructure Planning (EIA) Regulations 2017 (collectively referred to as the EIA Regulations from here).

The EIA Regulations require:

'A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters...' (Schedule 4, Paragraph 8)

The underlying objective of the assessment is to ensure that appropriate precautionary actions are taken for those developments which:

'...because of their vulnerability to major accidents and/or natural disasters (such as flooding, sea level rise, or earthquakes), are likely to have significant adverse effects on the environment.' (Paragraph 15 of Directive 2014/52/EU)

A key aim of the EIA Directive update was to ensure efforts are not duplicated, reinforcing the need for proportionality. It further states:

'In order to avoid duplications, it should be possible to use any relevant information available and obtained through risk assessments carried out pursuant to Union legislation, such as Directive 2012/18/EU of the European Parliament and the Council (13) and Council Directive 2009/71/Euratom (14), or through relevant assessments carried out pursuant to national legislation provided that the requirements of this Directive are met.' (Paragraph 15 of Directive 2014/52/EU)

The UK already has a structured framework of risk management legislation in place. This guidance therefore suggests a 'sign-posting' approach to assessment, making efficient use of existing and available risk assessments rather than duplicating any risk quantification and management already undertaken on developments as part of the assessment approach.

This primer recognises that primary and tertiary mitigation (refer to Appendix A for definitions) of a development's vulnerability to major accidents and/or disasters, for infrastructure and other built environment developments, is covered by a wide range of other safety and non-safety-related legislation. This mitigation is generally sufficient to manage vulnerabilities to major accidents and/or disasters without the need for secondary mitigation in most circumstances. The guidance within this primer aims to help developments communicate this process to stakeholders through the Environmental Statement² to demonstrate how a development's vulnerability to major accidents is adequately managed to prevent or reduce potential significant adverse effects to environmental receptors.

Structure of the remaining document

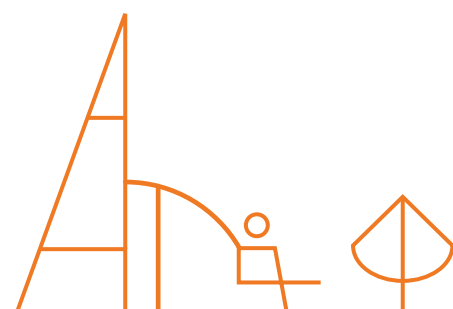
The remainder of this primer presents an assessment approach that can be adopted by impact assessment practitioners undertaking a major accident and/or disasters assessment. This can act as a basis for methodology to evolve as experience in the field grows.

The following steps are covered:

- Screening
 - Identifying if a development falls within the definition of EIA development under the EIA Regulations, by virtue of the likelihood of significant environmental effects from major accidents and/or disasters.
- Scoping
 - Deciding if a major accidents and/or disasters assessment should be scoped in or out of the EIA.
 - If scoped in, how to set out a proposed methodology as part of a scoping report.
- Assessment
 - Key steps to enable practitioners to undertake an assessment and identify any potential significant effects that require further mitigation.
 - Understanding risk management options as part of the process.

Further detail is included within the following appendices:

- **Appendix A** – supplementary terminology drawn from existing sources providing a background appreciation of current definitions that have informed key terminology for this topic.
- **Appendix B** – references to the broader legislative context surrounding the topic.
- **Appendix C** – a sample of existing case studies to demonstrate how this assessment approach can be applied.
- **Appendix D** – a hazard identification record template to support the assessment process.
- **Appendix E** – a selection of frequently asked questions that have arisen as the methodology for this topic has evolved.
- **Appendix F** – references that have informed this primer.



Screening for EIA

The level of effort required at the screening stage for major accidents and/or disasters is likely to be minimal. During screening it should be sufficient to *identify if a development has a vulnerability to major accidents and/or disasters* and to consider whether a development could lead to a significant effect.

High-level questions to consider (which will be considered in more detail at the scoping stage if screened in) could include:

- Is the development a source of hazard itself that could result in a major accident and/or disaster occurring?
- Does the development interact with any sources of external hazards that may make it vulnerable to a major accident and/or disaster?
- If an external major accident and/or disaster occurred, would the existence of the development increase the risk of a significant effect to an environmental receptor occurring?

Considering these at a high level, without necessarily providing evidence at this stage, should help guide whether the development has the potential to be vulnerable to major accidents and/or disasters, or to increase vulnerability elsewhere.

It is valid to consider and identify proposed mitigation at the screening stage. If it is possible to demonstrate that proposed design measures, existing legal requirements, and codes and standards are likely to adequately control any potential vulnerability to a major accident and/or disaster then this should be factored into the conclusion.

If a development is not vulnerable to major accidents and/or disasters and is not likely to increase vulnerability elsewhere, it is unlikely to lead to an event that would cause a significant environmental effect upon a receptor. In these circumstances, it should be valid to propose that the requirement for EIA is not triggered in relation to major accidents and/or disasters risks.



Scoping for EIA

The aim of the scoping stage is to determine in more detail whether there is potential for significant effects as a result of major accidents and/or disasters associated with a development, and the resulting scope of and approach to the assessment if required.

- o *Scoped in or out?*

To guide the scoping decision, think carefully about what is relevant to the development specifically, such as its

location, type, context, existing and future constraints, and likely receptors. A major accidents and/or disasters assessment will be relevant to some developments more than others, and for many developments it is likely to be scoped out of the assessment.

Figure 1 provides a process flow that can be used to help guide a scoping decision:

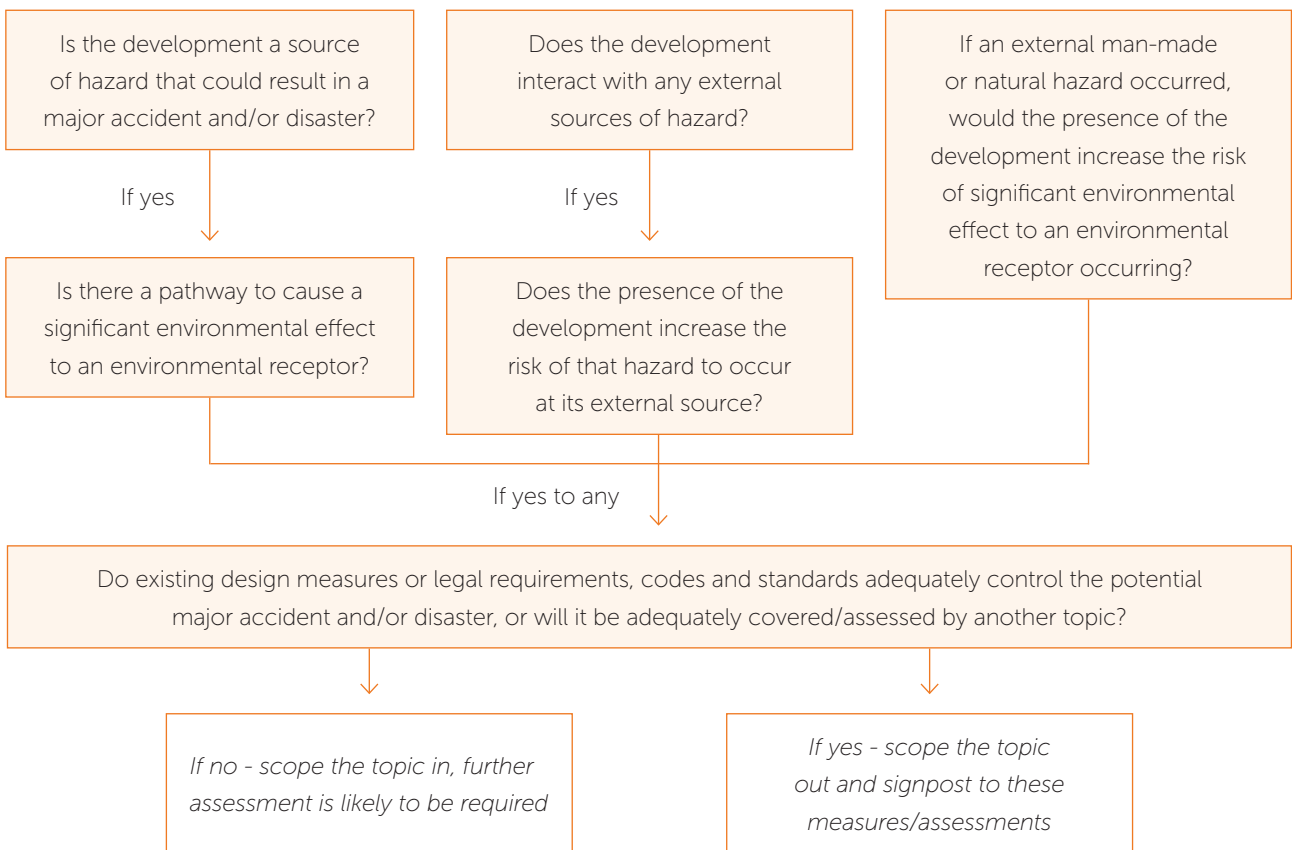


Figure 1 - scoping decision process flow

Major accidents and/or disasters can be scoped out of the assessment if you can clearly demonstrate that:

1. *there is no source-pathway-receptor linkage of a hazard that could trigger a major accident and/or disaster or potential for the scheme to lead to a significant environmental effect; or*
2. *all possible major accidents and/or disasters are adequately covered elsewhere in the assessment or covered by existing design measures³ or compliance with legislation and best practice.*

The Scoping Report can be used to signpost to the evidence that justifies scoping the topic out.

However, if there is any uncertainty, a major accidents and/or disasters assessment should be scoped in. This is likely to require discussion with clients or other stakeholders to explain the benefits of the assessment with reference to the need for clarity in the communication of development risks and how they will be managed.

Examples of scoping decisions for this topic on a variety of developments are provided in Appendix C.

o Scoped in – defining the scope

Even in circumstances when the topic is scoped into the assessment, it is likely that it can be limited to specific elements of the development or the baseline environment and therefore remain limited in scope. This needs to be clearly set out in the scoping report to manage expectations at an early stage, with a focus on proportionality and likely significant effects.

The scoping report should set out the following:

Baseline

In line with the EIA Directive, this will be existing sources of risk assessment or other relevant studies, rather than collecting survey data (as might typically be the case for other EIA topics for receptors that the major accidents and/or disasters topic may impact upon)⁴. Duplication of data gathering and risk assessment should be avoided, and standalone risk assessments for the topic should only be undertaken if the information is not available from existing sources.

Sources of risk assessment might include the developments Construction Design Management (CDM) risk register, relevant development studies such as geotechnical desk-based assessments, and System Safety Hazard Records. Other sources of information such as the UK's current National Risk Register⁵, and its associated local community risk registers⁶, may also provide useful prompts for any risks not captured in development-specific documentation. Data from the Health and Safety Executive, Environment Agency, and their counterparts in Scotland (Scottish Environment Protection Agency) and Wales (Natural Resource Wales), as well as local authorities, on adjacent Control of Major Accident Hazards (COMAH) and other potentially hazardous sites or installations should also be set out within the baseline.

You will need to consult with your development team, client and stakeholders to fully agree the extent of baseline information available and to be used. This will differ development to development.

³ For instance, altering the internal spatial layout of a scheme to simply avoid a hazard could be embedded as a primary mitigation measure at the scoping stage.

⁴ This is in accordance with Paragraph 15 of the EIA Directive 2014 to avoid duplication.

⁵ www.gov.uk/government/collections/national-risk-register-of-civil-emergencies

⁶ www.gov.uk/guidance/local-resilience-forums-contact-details

The above information will provide the list of hazards (the source part of the source-pathway-receptor linkage) that will then be collected and considered further in the assessment.

At the scoping stage, this data does not need to be collected or reported in full. The list of sources that will be used in the assessment should be set out in the scoping report for agreement with stakeholders, along with a request for any other sources of information they may wish to draw attention to.

Receptors

Receptors are features of the environment that are subject to assessment under Article 3 of the EIA Directive, namely population and human health, biodiversity, land, soil, water, air and climate, material assets, cultural heritage and landscape.

Relevant receptors can be identified through a review of base mapping and aerial photography, as well as through consultation with the development team and other EIA topic leads that may have identified receptors specific to their environmental topic.

For smaller developments, this might involve identifying, for instance, certain designated sites/areas that will be assessed as part of your assessment.

For larger-scale developments, this might instead focus on identifying groups of receptor types and focus on a more development-wide approach.

An environmental receptor that could be vulnerable to a major accidents and/or disasters risk, but is outside the scope of the wider EIA, is very unlikely so it is important to ensure these receptors align with the other topics considered under the EIA.

Deciding on a proportionate assessment

Not all potential events will fall into the scope of a major accidents and/or disasters assessment. The level of risk therefore needs to be defined to inform what types of events are within the scope of the major accidents and/or disasters assessment.

Events that have a high likelihood of occurring and would be of high consequence are a **high risk** and would be unacceptable for any development. These should already be managed or designed-out by a development. These might include, for example, an element of highway design that did not comply with standards leading to a major road traffic collision. These are therefore likely to be outside the scope of the assessment.

At the other end of the scale, low-impact events whatever the likelihood, such as minor spills, are **low risk** and are unlikely to be considered a major accidents and/or disasters risk. These events would not threaten immediate or delayed serious environmental effects to human health, welfare and/or the environment that require the use of resources beyond those of the client or its appointed representatives to manage. These are also therefore likely to be outside the scope of the assessment.

The assessment will typically focus on *low likelihood but potentially high consequence events*, refer to Figure 2.

Risks that are likely to lead to an event occurring, such as effects knowingly caused by a development like noise and vibration, are already assumed to be accounted for in other topics of the EIA and are not replicated. These impacts are a known impact, rather than an unplanned event, that would knowingly occur as the result of a development and would be specifically mitigated for. For example, the risk of irreversible impacts to human health caused by noise could meet the definition of a major accident and/or disaster, but the assessment and mitigation is covered elsewhere, in this instance under the EIA topic of noise.

The definition of a low likelihood event may be shaped through further practice. For the purposes of this primer

it is considered to be an event that could occur but is unlikely to. Specific time definitions for a development could be defined as part of scoping, recognising the likely timescales of construction and operation. For example, no more than once in X years for the construction phase, and no more than once in Y years for the operational phase. If a development risk matrix is available, reference can be made to this to define risk categories that are within the scope of the assessment.

Alternatively, professional judgement can be used when categorising events into their respective categories, provided there is a clear justification for the judgement made.

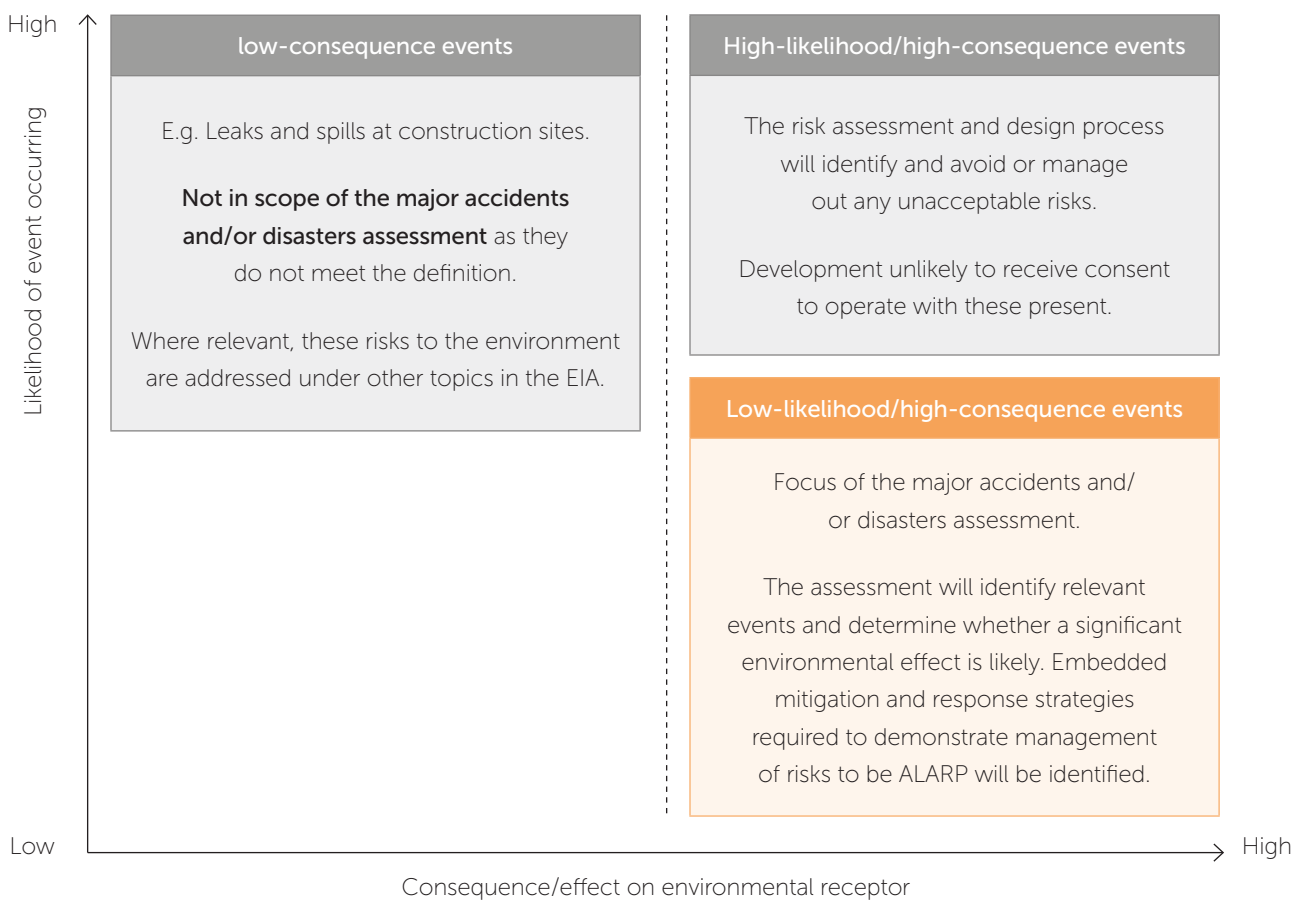


Figure 2 - Summary of Risk Events considered in the scope of the assessment for major accidents and disasters

Setting the spatial scope

This should include external features that may present a hazard to the development, even if these are beyond the scheme boundaries. For instance, the presence of a particular hazardous site may be beyond the development's construction and operational boundary, but still have the potential to interact with the development.

The assessment can be undertaken at a development (rather than receptor) level, depending on the nature of the scheme. However, where relevant, any locations considered more vulnerable to a major accident and/or disaster and/or sensitive to significant adverse effect, should be clearly identified.

Defining significance

As part of scoping, it will be important to agree what the definition of a significant effect will be. Factors that can be considered include:

- the **geographic extent** of the effects. Effects beyond the development boundaries are more likely to be considered significant;
- the **duration** of the effects. Effects which are permanent (i.e. irreversible) or long-lasting are more likely to be considered significant;
- the **severity** of the effects in terms of number, degree of harm to those affected and the response effort required. Effects which trigger the mobilisation of substantial civil emergency response effort are more likely to be considered significant;
- the **sensitivity** of the identified receptors; and
- the **effort required to restore the affected environment**. Effects requiring substantial clean-up or restoration efforts are more likely to be considered significant.

Drawing from criteria within Annex VI of the Seveso III Directive, a significant adverse effect can be specified (see Appendix B).

As an example, the significance threshold could be set at anything that causes the loss of life or permanent injury, and/or permanent or long-lasting damage to an environmental receptor. However, this is just one example and the threshold set will differ depending on multiple factors on different developments. Significance criteria are also likely to be shaped through further practice.

Defining exclusions

It is important to define conditions to which vulnerabilities to major accidents and/or disasters do not apply, and any elements scoped out of the assessment as a result, subject to detailed consideration by the development team (including any legal advisors) and agreement with stakeholders. These should be clearly communicated in the scoping report and might include, for example:

- **low-consequence (regardless of likelihood)** events – the EIA Regulations focus on major accidents and/or disasters, both of which terms imply significant harm. So, for example, likely construction-related accidents such as slips, trips and falls should not fall within the scope;
- **high-likelihood, high-consequence** events – these should be addressed elsewhere, and being unacceptable by definition, are implicitly outside scope;
- any hazards for which there is **no credible source-pathway-receptor** linkage;
- this will be a development-specific decision, but it may be appropriate to consider excluding effects on members of the public who **wilfully trespass**. If the development takes appropriate measures to provide a secure boundary to reduce likelihood of trespass, those ignoring these measures might not be considered valid receptors. It could be considered that a development will already have mitigated for trespass as far as reasonably practicable, so there would be no further mitigation available to mitigate further;

-
- also dependent on individual development decisions, but it may be appropriate to consider excluding effects on **employees** working on-site, as they are protected by existing health and safety legislation, although this should be agreed on a development-by-development basis to ensure this is the case; and
 - hazards associated with **other topics**, for example, damage or contamination of aquifer or borehole which would typically fall under a water/flood risk/land quality assessment.

Agreeing how the assessment will be reported

There are several options for reporting the major accidents and/or disasters assessment. This should be agreed as part of the scoping process. Options include:

- within existing chapters, i.e. under an additional section heading, describing these as unplanned events, during construction and/or operation. This may involve a description of methodology in the upfront text describing this approach, and then for each EIA topic a section under construction and operation that deals with abnormal circumstances (major accidents and/or disasters);
- within a standalone major accidents and/or disasters chapter, which cross-references to other EIA topics where necessary; or
- as a risk assessment which is an appendix to the scoping report or the Environmental Statement and referred to as part of the 'Description of the development' or 'Scope of the Assessment' sections.

The decision should be made on a development-by-development basis and included in the scoping report for agreement with stakeholders.

Summary

To recap, the following factors should be agreed with stakeholders at the scoping stage:

- the reasons for either scoping the topic in or out;
- if scoped in:
 - the sources of information to be used for the baseline to inform the assessment;
 - the receptors that will be considered as part of the assessment;
 - the spatial scope of the assessment;
 - how significance will be defined;
 - the inclusions and exclusions within the assessment; and
 - any unknowns or uncertainties that are inherent in the data or the assessment.

Assessment

If major accidents and/or disasters has been scoped into the assessment, the methodology for undertaking the assessment might follow the example provided in this section. However, methodologies may vary between developments and is likely to evolve with practice.

A robust record of all steps should be kept. As with any EIA topic it is possible that during consultation, some major accidents and/or disasters hazards are queried, and it should be possible to refer to how or why these were screened out or assessed further.

- **Setting out the baseline – hazard identification and receptor tagging**

Using the baseline sources agreed through scoping, commence the analysis to identify hazards that will be assessed.

Risk registers are typically live documents and will need to be frozen at set times so they can be used to inform the assessment. This may align with particular design freeze points in the programme or happen at other times. For the avoidance of any doubt, the version of any data used should be clearly stated in the assessment assumptions.

The multiple sources of information you analyse should be collated and presented consistently in one [hazard identification record](#), an example template for which is presented in Appendix D. This collated hazard identification record will provide the evidence base for the assessment.

Depending on the scale of the development, identified hazards may be grouped into high-level 'Risk Events' which have the same potential consequence. This can help to keep the assessment proportionate. For example,

all hazards, sources and pathways that could lead to a major road traffic accident could be combined, since it is the traffic accident that has the potential to cause harm to an environmental receptor, regardless of the cause.

The grouped Risk Events should then be reviewed and assigned to relevant environmental receptors that may experience an impact (noting the scope you agreed during scoping). This may be specific, such as a river at a certain location, or more general, such as members of the public in the vicinity. This tagging can be added to the hazard identification record template. It is unlikely that your existing baseline data will have categorised hazards against receptors, and therefore this is an important step. This may require further consultation with EIA topic leads to inform an understanding of what receptors are present within the location that a grouped Risk Event could occur.

If you have a Risk Event with no valid receptor tagged against it then this Risk Event will not require further assessment as there is no valid source-pathway-receptor linkage. This can be reported in the hazard identification record template and discounted from any further reference in the assessment.

○ **Assessment – identifying reasonable worst-case impact**

As you move into assessing major accidents and/or disasters impacts, the reasonable worst-case environmental impact should be identified for each grouped Risk Event with a valid receptor.

This is likely to be done qualitatively, using professional judgement and consultation with other EIA topic specialists to understand what a reasonable worst-case impact might be for that receptor. If there is any uncertainty around what the reasonable worst-case impact might be, then a realistic level of caution is recommended. Generally, it will be possible to demonstrate later in the assessment that the reasonable worst-case impact has been mitigated despite the inherent uncertainty.

The following question may assist at this point in the process:

‘Could the grouped Risk Event reasonably constitute a major accident and/or natural disaster in terms of the definitions provided?’

For example, if the grouped Risk Event has the potential to harm a member of the public, the important consideration is whether that harm could constitute a fatality, multiple fatalities or permanent injury – all of which are likely to classify it as a major accident and/or disaster (noting any exclusions your assessment may make, such as trespassers).

Similarly, the impact on the natural environment should be considered in terms of widespread or irreversible harm.

The hazard identification record template (Appendix D) provides further examples of reasonable worst-case impacts.

The hazard identification record template should set out the results of the review process undertaken, recording consultations with other EIA topics as an evidence trail, and providing any other comments that will assist in demonstrating how an outcome was reached.

○ **Assessment – Selecting the grouped Risk Events that need further assessment**

It is expected that the collated and grouped hazard identification record will hold some information that may not be relevant to the overall assessment. At this stage you can consolidate your hazard identification record by screening out any Risk Events that meet the following criteria:

- there is **no source-pathway-receptor linkage**;
- the receptor is **not within scope**, as defined through scoping;
- the consequence **does not meet the criteria of a significant environmental effect**, and therefore the grouped Risk Event is not a potential major accident and/or disaster; or
- the **consequence and likelihood of the risk is high**, to the extent that it is considered unacceptable to the development and has therefore been designed-out or otherwise managed.

The reasons for screening these out of further detailed assessment should be recorded in the hazard identification record.

Remaining grouped Risk Events should then be assessed further as described in the following sections. This will determine whether potential significant effects on receptors are already managed and/or mitigated to an acceptable level (i.e. perhaps using the term as low as reasonably practicable [ALARP]) or whether there are gaps in mitigation that need to be addressed through secondary mitigation.

○ **Assessment – understanding the likelihood of a Risk Event occurring**

The possibility of the reasonable worst-case environmental impact occurring should be evaluated considering:

- the likelihood of the grouped Risk Event occurring considering the measures already embedded into the design and best practice (primary and tertiary mitigation); and
- the likelihood that an environmental receptor is affected by the reasonable worst-case grouped Risk Event following primary and tertiary mitigation.

Likelihood assessments need not be quantitative but should evaluate and report as part of the hazard identification risk record whether the reasonable worst-case impact you have identified is a realistic outcome of the grouped Risk Event therefore requiring further mitigation, or whether this outcome has already been adequately addressed by embedded and best practice mitigation measures.

This evaluation can refer to existing risk assessments as well as consultation with relevant EIA topic and non-EIA (i.e. members of the design team) specialists, with reference to the definition of low likelihood.

Non-technical consultees, such as affected residents, will understand a description around the chance of fatality due to explosion, for example, better than a probability such as 'less than 1 in 1,000'. Therefore, careful consideration should be given to the communication of likelihood in simple terms. For instance, a development may use terms such as a development has 'x' chance of an event happening over the next 10 years.

○ **Mitigation – identifying the requirements for secondary mitigation**

The outcome of the above activity will highlight risks for which existing primary and tertiary (embedded and best practice) measures do not provide sufficient mitigation to reduce the risk to an acceptable level, and therefore significant effects could occur. Where this is the case, secondary (additional) measures will be required.

In consultation with relevant topic leads, secondary mitigation must be developed to manage the risk to an acceptable level, most likely below the significance criteria for a major accident and/or disaster.

○ Mitigation – risk management options

Risk management options for major accidents and/or disasters will fall into one of the following categories, consistent with the mitigation hierarchy used for EIA generally:

- **eliminate** (or 'avoid') the risk, by adopting alternative processes to eliminate the source of the hazard or remove the receptor.
- **reduce** the risk by adapting proposed processes such that either the likelihood or the impact of the Risk Event can be reduced.
- **isolate** the risk, by using physical measures to ensure that should the Risk Event occur, it can be effectively isolated such that there is no pathway.
- **control** the risk, by ensuring that appropriate control measures are in place (e.g. emergency response) so that should a Risk Event occur, it can be controlled and managed appropriately. The EIA mitigation hierarchy of repair and compensate for any significant damage to environmental receptors may then apply following a control measure; and
- **exploit** the risk, if it presents potential benefits or new opportunities, for instance moving an existing asset to which a development relates further from a potential source of hazard, such as a hazardous site.

○ Residual assessment

As the impact of safety risks must be adequately addressed within the regulatory framework of a development it is not anticipated that significant residual effects will be identified following assessment, although further practice will inform this further.

Importantly, the above process should focus on demonstrating how secondary mitigation reduces the likelihood and/or significance of the reasonable worst-case impact occurring to an acceptable level. The hazard identification risk record can be used to report this process and demonstrate the following flow of assessment:

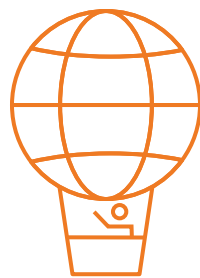
- Risk event leads to reasonable worst-case impact upon receptor.
- Reasonable worst-case impact identified as not adequately mitigated via primary and tertiary mitigation, and as such, significant adverse effect likely to occur.
- Secondary mitigation options explored.
- Reasonable worst-case impact adequately mitigated to acceptable limits, or reasons for not doing so clearly justified.



Final words

The major accidents and/or disasters topic requires consultation and collaboration over and above specialist EIA topic-specific skills. Where specialist risk assessments are required, it is expected that this expertise would generally already exist within the client or the development team, and the role of the major accidents and/or disasters topic team is to consult with these specialists and connect their work to the EIA.

The guidance presented in this primer will evolve as practice in the field emerges. The primer offers an example approach and does not stipulate that this method should be followed. Instead the content should be used as a basis to help build awareness and a platform from which to evolve the approach. As practice evolves, this primer will be updated and a move towards an agreed uniform approach – preferably in the form of a practical guidance note – may be issued.



Appendix A – Supplementary terminology

| Definition | Source | Comment |
|--|--|--|
| <p>Accident: ‘Something that happens by chance or without expectation’.</p> <p>Disaster: ‘A sudden accident or a natural catastrophe that causes great damage or loss of life’.</p> | Oxford English Dictionary | |
| <p>‘Serious accident’ means any train collision or derailment of trains, resulting in death of at least one person or serious injury to five or more persons, or extensive damage to rolling stock, the infrastructure, or the environment, and any other similar accident with an obvious impact on railway safety regulation or the management of safety.</p> <p>‘Extensive damage’ means damage that can immediately be assessed by the investigating body to cost at least £2 million in total.</p> | Railway Safety Directive (Directive 2004/49/EC) | The definition applies to a wider scope of impacts than required under the EIA Directive (refer to section 4 above) |
| <p>To satisfy the definition of ‘emergency’ under the Act, the event or situation must threaten serious damage to human welfare in, or the environment of, a place in the United Kingdom.</p> <p>Additionally, to constitute an emergency, an incident or situation must also pose a considerable test for an organisation’s ability to perform its functions.</p> <p>The common themes of an emergency are the scale of the impact of the event or situation; the demands it is likely to make of local responders; and the exceptional deployment of resources.</p> | Civil Contingencies Act 2004 and Her Majesty’s Government’s accompanying non-statutory guidance ⁷ | This Act provides an overarching framework for preparing for and responding to civil emergencies within the United Kingdom |
| <p>‘An occurrence such as a major emission, fire, or explosion resulting from uncontrolled developments in the course of the operation of any establishment covered by this Directive and leading to serious danger to human health or the environment, immediate or delayed, inside or outside the establishment, and involving one or more dangerous substances.’</p> | The Seveso III Directive (Directive 2012/18/EU) | Relates to the COMAH involving dangerous substances |

| Definition | Source | Comment |
|--|---|--|
| <p>Events with the potential to result in:</p> <ul style="list-style-type: none"> • the death or adverse effects on local populations of species or organisms, with lower thresholds for high-value or protected species; • contamination of drinking water supplies, ground or groundwater; • damage to designated areas, habitats or populations of species within the areas; • damage to listed buildings; • damage to widespread habitats; and • damage to the marine or aquatic environment. | <p>The Control of Major Accident Hazards (COMAH) regulations, 2015 and the HSE guidance on implementing them⁸</p> | <p>The requirements of the Seveso III Directive are transposed into UK legislation via the COMAH regulations</p> |
| <p>'Major accident' is defined as an occurrence on-site [...] leading to a loss of life or serious danger to human health and/or the environment, whether immediately or over time, on-site or off-site.</p> <p>'Serious danger to human health' relates to people present permanently or for prolonged periods of time in the potentially affected area but excludes workers operating at the facility. Injuries leading to disability or prolonged states of ill health shall count as serious dangers to human health.</p> <p>'Serious danger to the environment' relates to:</p> <ul style="list-style-type: none"> • a contaminant source strength that does not decrease significantly within a short time; • permanent or long-lasting environmental damage; and • the affected environment not being restored through minor clean-up and restoration efforts. | <p>Major Accident Off-Site Emergency Plan (Management of Waste from Extractive Industries) (England and Wales) Regulations 2009⁹</p> | <p>These regulations implement the provisions of the Mining Waste Directive (Directive 2006/21/EC)</p> |

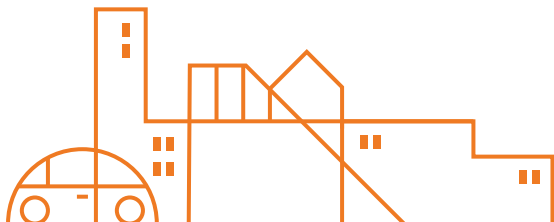
⁸ Health and Safety Executive (2015) The Control of Major Accident Hazards Regulations 2015: Guidance on Regulations, L111, Third Edition, June 2015

⁹ Department of Environment, Food and Rural Affairs (2011) Guidance: Major Accident Off-Site Emergency Plan (Management of Waste from Extractive Industries) (England and Wales) Regulations 2009 Mining Waste Directive: Article 6 Category 'A' Waste Facilities. Department of Environment, Food and Rural Affairs, August 2011.

| Definition | Source | Comment |
|---|--|--|
| <p>Refer to Section 3.2 of the CDOIF guidelines for thresholds to be used when determining the potential for a Major Accident to the Environment (MATTE) to a variety of defined environmental receptors. The thresholds outlined must be exceeded for the scenario to be considered a potential MATTE.</p> | <p>Chemical and Downstream Oil Industries Forum (CDOIF) – Guideline Environmental Risk Tolerability for COMAH Establishments</p> | |
| <p>Hazard – something with the potential to cause harm.</p> | <p>Institution of Occupational Safety and Health (IOSH)</p> | <p>IOSH is the Chartered body for health and safety professionals</p> |
| <p>Likelihood – chance of something happening.</p> <p>Note 1: In risk management terminology, the word 'likelihood' is used to refer to the chance of something happening, whether defined, measured or determined objectively or subjectively, qualitatively or quantitatively, and described using general terms or mathematically (such as a probability or a frequency over a given time period).</p> <p>Note 2: The English term 'likelihood' does not have a direct equivalent in some languages; instead, the equivalent of the term 'probability' is often used. However, in English, 'probability' is often narrowly interpreted as a mathematical term. Therefore, in risk management terminology, 'likelihood' is used with the intent that it should have the same broad interpretation as the term 'probability' has in many languages other than English.</p> <p>Risk – effect of uncertainty on objectives.</p> <p>Note 1 – An effect is a deviation from the expected. It can be positive, negative or both, and can address, create or result in opportunities and threats.</p> <p>Note 2 – Objectives can have different aspects and categories and can be applied at different levels.</p> <p>Note 3 – Risk is usually expressed in terms of risk sources, potential events, their consequences and their likelihood.</p> | <p>ISO 31000:2018</p> | <p>ISO 31000 is a family of standards relating to risk management codified by the International Organization for Standardization. The purpose of ISO 31000:2009 is to provide principles and generic guidelines on risk management</p> |

| Definition | Source | Comment |
|---|--------|---------|
| <p>Selected criteria for notification of a major accident to the European Commission under Article 18(1) of Directive 2012/18/EU and Regulation 26 of the COMAH Regulations 2015. A major accident meets the criteria for notifying the European Commission, if it has at least one of the consequences described in Paragraphs 1 to 4 below:</p> <p>Injury to persons and damage to property:</p> <ul style="list-style-type: none"> a. a death; b. six persons injured within the establishment and hospitalised for at least 24 hours; c. one person outside the establishment hospitalised for at least 24 hours; d. a dwelling outside the establishment damaged and unusable as a result of the accident; e. the evacuation or confinement of persons for more than 2 hours where the value (persons x hours) is at least 500; or f. the interruption of drinking water, electricity, gas or telephone services for more than 2 hours where the value (persons x hours) is at least 1,000. <p>Immediate damage to the environment:</p> <ul style="list-style-type: none"> a. Permanent or long-term damage to terrestrial habitats: <ul style="list-style-type: none"> i. 0.5 hectares or more of a habitat of environmental or conservation importance protected by legislation; or ii. 10 or more hectares of more widespread habitat, including agricultural land; b. Significant or long-term damage to freshwater and marine habitats: <ul style="list-style-type: none"> i. 10 km or more of river or canal; ii. 1 hectare or more of a lake or pond; iii. 2 hectares or more of delta; or iv. 2 hectares or more of a coastline or open sea; or c. Significant damage to an aquifer or underground water: 1 hectare or more. <p>Damage to property:</p> <ul style="list-style-type: none"> a. damage to property in the establishment, to the value of at least EUR 2,000,000; or b. damage to property outside the establishment, to the value of at least EUR 500,000. <p>Cross-border damage: any major accident directly involving a dangerous substance giving rise to consequences outside the territory of the Member State concerned.</p> | | |

| Definition | Source | Comment |
|---|---|--|
| <p>Mitigation – means primary (inherent design), secondary (foreseeable) and tertiary (inexorable) measures.</p> <p>Primary – Modifications to the location or design of the development made during the pre-application phase that are an inherent part of the development, and do not require additional action to be taken.</p> <p>Secondary – Actions that will require further activity to achieve the anticipated outcome. These may be imposed as part of the planning consent, or through inclusion in the ES.</p> <p>Tertiary – Actions that would occur with or without input from the EIA feeding into the design process. These include actions that will be undertaken to meet other existing legislative requirements, or actions that are considered standard practices used to manage commonly occurring environmental effects.</p> | <p>IEMA (2016), Environmental Impact Assessment Guide to Delivering Quality Development</p> | <p>Mitigation considered in the following order:</p> <p>Primary = Embedded mitigation</p> <p>Tertiary = Good practice</p> <p>Both above are considered when initially predicting environmental effects. If significant effects remain following this initial assessment, consideration of secondary mitigation is made.</p> <p>Secondary = Additional mitigation</p> |



Appendix B – Useful legislation

The below is a selection of some of the legislative background surrounding developments but is not comprehensive. A full review of all relevant legislation should be undertaken for each individual development.

| Legislation | Description |
|---|--|
| Health and Safety at Work etc. Act 1974 (HSWA) | This legislation places general duties on employers, people in control of premises, manufacturers and employees. Health and safety regulations made under this Act contain more detailed provisions. The Act provides the framework for the regulation of industrial health and safety in the UK. The overriding principle is that foreseeable risks to persons in workplaces shall be reduced so far as is reasonably practicable and that adequate evidence shall be produced to demonstrate that this has been done. |
| Construction (Design and Management) Regulations 2015 (CDM Regulations) | These regulations place specific duties on clients, designers and contractors so that health and safety is considered throughout the life of a construction development from its inception to its subsequent final demolition and removal. Under the CDM Regulations, designers are required to avoid foreseeable risks so far as reasonably practicable by eliminating hazards from the construction, cleaning, maintenance, and proposed use and demolition of a structure, reducing risks from any remaining hazard, and giving collective safety measures priority over individual measures. |
| The Management of Health and Safety at Work Regulations 1999 | These regulations generally make more explicit what employers are required to do to manage health and safety under the HSWA. |
| Electricity at Work Regulations (1989 No. 635) | The purpose of the Regulations is to require precautions to be taken against the risk of death or personal injury from electricity in work activities. |

| Legislation | Description |
|---|--|
| EU Regulation 402/2013 on the Common Safety Method on Risk Evaluation and Assessment (CSM-RA) (as amended by Regulation EU 2015/1136) | An EU Regulation that describes the methods required to be used to assess compliance with safety levels and safety requirements. |
| The Planning (Hazardous Substances) Regulations 2015 | The Planning (Hazardous Substances) Regulations 2015 implement land-use planning requirements under the Seveso III Directive (2012/18/EU) on the COMAH. Hazardous substances consent is required for the presence of certain hazardous substances at or above controlled quantities specified. |
| Control Of Major Accident Hazards (COMAH) Regulations 2015 | The COMAH Regulations aim to prevent and mitigate the effects of major accidents involving dangerous substances which can cause serious damage/harm to people and/or the environment. COMAH treats risks to the environment as seriously as those to people. |
| Seveso III Directive | Main EU legislation dealing specifically with the control of onshore major accident hazards involving dangerous substances. |



Appendix C – Case studies

| Development | Scoped in or out? | Link | Comments/Planning Inspectorate (PINS) feedback |
|-----------------------------------|-------------------|---|---|
| High Speed 2 (HS2) Phase 2a | In | <p>www.gov.uk/government/collections/hs2-phase-2a-environmental-statement</p> <p>www.gov.uk/government/consultations/hs2-phase-2b-draft-environmental-impact-assessment-scope-and-methodology-report</p> | <p>For High Speed Two Phase 2a, a significant adverse effect was considered to mean the loss of life or permanent injury, and/or permanent or long-lasting damage to an environmental receptor. Note: this may be considered a low threshold within the health and safety discipline; however, given the sensitivity of the consultation, it was found to be difficult to support anything else.</p> |
| Expansion of London Luton Airport | In | <p>infrastructure.</p> <p>planninginspectorate.gov.uk/projects/eastern/expansion-of-london-luton-airport/?ipcsection=docs&stage=1&filter1=Environmental+Impact+Assessment+S coping</p> | <p>At the scoping stage, PINS commented that insufficient information had been provided on measures already in place to scope out some risk items. The Environmental Statement (ES) should include a definition of these and the current systems in place to address impacts for these matters.</p> <p>On-site safety of Airport staff should be taken into consideration, in addition to the on-site safety of members of the public.</p> <p>The ES should establish a baseline in respect of natural disasters, for example setting out the current susceptibility of the site to seismic movement, extreme storms, tornadoes, snow and fog.</p> <p>Any risk registers relied upon must be made public. The ES should clearly demonstrate how significance factors are taken into consideration and combined to determine the overall significance of effects.</p> <p>The ES must clearly set out the risk tolerability criteria referred to and contain an explanation as to how it has been taken into consideration within the assessment in concluding on likely significant effects.</p> |

| Development | Scoped in or out? | Link | Comments/Planning Inspectorate (PINS) feedback |
|---------------------------------|-------------------|---|--|
| A30 Chiverton to Carland Cross | Out | infrastructure.planninginspectorate.gov.uk/projects/south-west/a30-chiverton-to-carland-cross-scheme/?ipcsection=docs&stage=1&filter1=Environmental+Impact+Assessment | <p>High-level screening undertaken as part of scoping. This showed that the volume and type of traffic using the development would not change significantly from that using the current road alignment, and therefore it was reasonable to conclude that there was no general increase in risk of a major accident and/or disaster.</p> |
| Cuadrilla Shale Gas Exploration | Considered | cuadrillaresources.uk/wp-content/uploads/simple-file-list/PNR-Planning-/Environmental-Risk-Assessment.pdf | <p>In the form of an Environmental Risk Assessment, prior to 2017 EIA Regulations. Mandated by Royal Society, and sensible given potential hazards associated with, and high-profile nature, of development.</p> <p>Document to provide assurance to the Department for Energy and Climate Change (DECC), that an appropriate risk management structure is in place, and that environmental risks to human health and the environment have been robustly identified and will be managed appropriately or controlled.</p> <p>The focus of the risk assessment was on identifying and assessing the unplanned outcomes from the proposed activities of construction, operation and restoration of the proposed shale gas exploration development.</p> <p>Risks identified were broken down into source; pathway; receptor; development phase; embedded mitigation measures; likelihood; consequence; risk score; justification for risk score; and comments for clarity. The document was provided ahead of the EIA for the development.</p> |

| Development | Scoped in or out? | Link | Comments/Planning Inspectorate (PINS) feedback |
|--|-------------------|--|---|
| Expansion of Heathrow Airport (Third Runway) | In | infrastructure.planninginspectorate.gov.uk/projects/london/expansion-of-heathrow-airport-third-runway/?ipcsection=docs&stage=1&filter1=Environmental+Impact+Assessment+Scoping | <p>Although scoped in, the scoping report proposes to scope several matters out. However, the scoping opinion from PINS requests a number of these to be scoped back in or provide further justification and baseline for scoping out.</p> <p>The ES should establish a baseline in respect of natural disasters, for example setting out the current susceptibility of the site to seismic movement, extreme storms, tornadoes, snow and fog.</p> <p>Study area needs to be agreed with the Civil Aviation Authority (CAA), Heathrow Strategic Planning Group (HSPG) and other affected local authorities.</p> <p>ES should take account of the major accident hazard sites and major accident hazard pipelines identified by the Health and Safety Executive.</p> |
| Gatwick Airport Northern Runway | In | infrastructure.planninginspectorate.gov.uk/projects/south-east/gatwick-airport-northern-runway/?ipcsection=docs&stage=1&filter1=Environmental+Impact+Assessment+Scoping | <p>PINS commented:</p> <p>Public Safety Zones (PSZ) to be considered. Not enough detail presented to presently scope out risks that will not increase risk compared to existing situation, and those perceived to already be mitigated by existing protocols.</p> <p>Little justification for the study areas selected (10km for "wider events" related to airspace and 1km for ground based/on-site events) beyond the use of expert judgement. PINS do not consider arbitrary distances should be applied and instead be based on individual Risk Events. Approach to be agreed with relevant consultation bodies.</p> |

| Development | Scoped in or out? | Link | Comments/Planning Inspectorate (PINS) feedback |
|--------------------------------------|------------------------------|---|---|
| Drax Re-power | In | infrastructure. planninginspectorate.gov.uk/ projects/yorkshire-and-the- humber/drax-re-power/?ipcsectio n=docs&stage=app&filter1=Enviro nmental+Statement | <p>No topic chapter proposed in scoping. PINS considered that the description of the development should address the risk of major accidents and/or disasters relevant to the development concerned. If risks are identified that have the potential to result in a likely significant environmental effect, these should be assessed within the ES along with the likely measures that will be employed to prevent and control such matters.</p> |
| Sizewell C New Nuclear Power Station | In (as part of other topics) | infrastructure. planninginspectorate.gov.uk/ projects/eastern/the-sizewell-c- project/?ipcsection=docs&stag e=app&filter1=Environmental+S tatement | <p>PINS commented that information presented within other technical assessments may not be enough to undertake the assessment of major accidents and disasters.</p> <p>ES should include criteria against which impacts will be assessed to establish the worst-case scenario for each risk.</p> <p>Significance criteria to be agreed with relevant consultation bodies.</p> <p>ZoI [zone of influence] may need to broaden beyond just surrounding land.</p> <p>ES should consider incidents and accidents at relevant similar facilities that have occurred both in the UK and abroad.</p> |

| Development | Scoped in or out? | Link | Comments/Planning Inspectorate (PINS) feedback |
|-----------------------------|-------------------|---|---|
| Brent Field Decommissioning | Considered | assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/590278/Brent_Field_Environmental_Statement.pdf | <p>Oil rig decommissioning in the North Sea. EIA carried out prior to 2017 EIA Regulations, therefore not a full assessment, but consideration for major accidents and disasters.</p> <p>Each decommissioning option was broken down into activities/end points, which were then evaluated against a range of environmental and socioeconomic categories including: onshore, resource use, hazardous substances, waste, physical, marine, environmental risk from accidents, employment, legacy, fisheries, shipping, energy and emissions) to identify the environmental impacts (spillages of oil/chemicals, broken vessels/pipelines, misplaced disposal. A system for emergency preparedness and response is maintained by Shell to ensure that the correct action is taken in the event of an incident or accident that could affect the environment. Arrangements covering the Brent Decommissioning development activities, and in particular oil spill or release contingency planning arrangements were made.</p> <p>E.g. the response strategy incorporates areas such as trans- boundary arrangements, the resources available (onshore and offshore) to deal with releases, dispersants available on the standby vessel, and membership of Oil Spill Response Limited (OSRL).</p> |

Appendix D – Hazard identification record template

| Grouped Risk Event | Source and/or pathways | Receptor | Source document | Reasonable worst consequence if event did occur | Are cross-disciplinary impacts likely? | | | | | | | | | | | Text | | | | | | | | | |
|-----------------------------|---|----------|-------------------|---|--|-------------|-----------|-------------------|---------|--------|--------------|----------------------|----------------|----------------------------|----------------------------|--------------------------------|-----------------------------|--|---|--|--|--|-----|-----|--|
| | | | | | Agriculture, forestry and soils | Air quality | Community | Cultural heritage | Ecology | Health | Land quality | Landscape and visual | Socioeconomics | Sound, noise and vibration | Traffic and transportation | Water resources and flood risk | Primary/tertiary mitigation | Could this lead to a major accident and/or natural disaster with existing mitigation in place? | Is the reasonable worst consequence managed to an acceptable level with existing mitigation in place? | If no, what secondary mitigation is required to reach an acceptable level? | | | | | |
| Ground Collapse | Tunnelling | Various | CDM Risk Register | Ground settlement reaches surface resulting in subsidence and structural damage to buildings immediately above. | Y | | Y | | | | Y | | Y | | | | | | | | | | No | Yes | |
| Major road traffic accident | Working over or adjacent to existing highways. Movement of construction vehicles along public roads and adjacent to public rights of way. | Various | CDM Risk Register | Death and/or injury to a member of the public. Delays and congestion in surrounding area. | | | Y | | | | Y | | | Y | | | | | | | | | Yes | Yes | |

Appendix E – FAQs

Below is a selection of frequently asked questions that arose in drafting this primer that may offer some further guidance.

How to consider malicious threats, wilful harm or terrorism?

The focus of the assessment is the impact of a major accident and/or disaster on the environment, regardless of the specific cause, for example, explosion rather than bombing, or obstacle in road rather than specifically a deer or a fly-tipped fridge.

The correct security measures specific to the nature and scale of the development should always be in place prior to operation to prevent such threats if they are relevant.

What about residual risks?

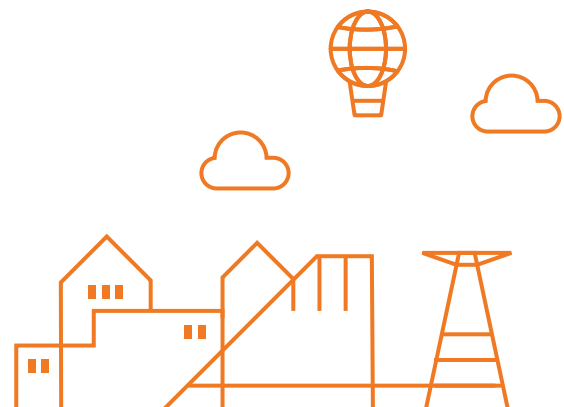
There needs to be a general acceptance when conducting a major accidents and/or disasters assessment that some risks, however unlikely, may still occur. Mitigation should be identified pre-event and post-event to reduce the effects to an acceptable level. For those risks that cannot be completely designed-out, emergency plans are available to deal with the response in order to minimise the significance of any impacts.

Are the EIA Regulations the correct vector for this topic?

We are all aware of the environmental consequences of events such as Deepwater Horizon, Fukushima, Seveso and Chernobyl. The process within the assessment offers a cross-disciplinary and alternative environmental lens of focus to development risk which may lead to previously unconsidered risks. The major accidents and/or disasters assessment is also an opportunity to provide the public and decision-makers with a clear and logical approach to hazard identification and mitigation. It does not seek to replace or duplicate health and safety regulations that are in place to manage risks, rather to add to the available information on the potential major accidents and/or disasters risks of a development from an environmental perspective.

Will this not just become a tick box exercise?

Every development is unique. Each client and legal team will have their own issues and concerns, and each local authority is likely to develop its own approach to this assessment. Therefore, the scope of and approach to major accidents and/or disasters assessment is likely to differ greatly between developments. With time, there may be standard approaches to certain common risks events.



Appendix F – References

Cabinet Office (2017) National Risk Register of Civil Emergencies. Available at: assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/644968/UK_National_Risk_Register_2017.pdf

Cabinet Office (2018) Local resilience forums: contact details. Available at: www.gov.uk/guidance/local-resilience-forums-contact-details

Department of Environment, Food and Rural Affairs (DEFRA) (2011) Guidance: Major Accident Off-Site Emergency Plan (Management of Waste from Extractive Industries) (England and Wales) Regulations 2009 Mining Waste Directive: Article 6 Category "A" Waste Facilities. Department of Environment, Food and Rural Affairs, August 2011. Available at: assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69409/pb13626-mining-waste-directive.pdf

DEFRA and the Collaborative Centre of Excellence in Understanding and Managing Natural and Environmental Risks, Cranfield University (2011) Guidelines for Environmental Risk Assessment and Management: Green Leaves III, November 2011. Available at: www.gov.uk/government/publications/guidelines-for-environmental-risk-assessment-and-management-green-leaves-iii

Health and Safety Executive (2015) The Control of Major Accident Hazards Regulations 2015: Guidance on Regulations, L111, Third Edition, June 2015. Available at: www.legislation.gov.uk/uksi/2015/483/contents/made

HM Government (2013) Emergency Response and Recovery – Non-statutory guidance accompanying the Civil Contingencies Act 2004, Cabinet Office, 28 October 2013. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/253488/Emergency_Response_and_Recovery_5th_edition_October_2013.pdf

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. Available at: www.legislation.gov.uk/uksi/2017/572/pdfs/uksi_20170572_en.pdf

The Town and Country Planning (Environmental Impact Assessment) (England) Regulations 2017. Available at: www.legislation.gov.uk/uksi/2017/571/pdfs/uksi_20170571_en.pdf

The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017. Available at: www.legislation.gov.uk/ssi/2017/102/pdfs/ssi_20170102_en.pdf

The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017. Available at: www.assembly.wales/laid%20documents/sub-ld11027/sub-ld11027-e.pdf

The Town and Country Planning (Environmental Impact Assessment) (Northern Ireland) Regulations 2017. Available at: www.legislation.gov.uk/nisr/2017/83/pdfs/nisr_20170083_en.pdf

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APPENDIX 6: SECRETARY OF STATE DECISION LETTER FOR CLEVE HILL SOLAR PARK



Department for
Business, Energy
& Industrial Strategy

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Hugh Brennan
Managing Director
Cleve Hill Solar Park Limited
Woodington House
East Wellow
Hampshire
SO51 6DQ

Your ref: EN010085

28 May 2020

Dear Mr Brennan

PLANNING ACT 2008

APPLICATION FOR THE CLEVE HILL SOLAR PARK ORDER

1. Introduction

1.1 I am directed by the Secretary of State for Business, Energy and Industrial Strategy (“the Secretary of State”) to advise you that consideration has been given to the report dated 28 February 2020 of the Examining Authority (“the ExA”) – a panel comprising David Rose (Lead Member), Andrew Mahon and Helen Cassini – which conducted an examination into the application (“the Application”) submitted on 15 November 2018 by Cleve Hill Solar Park Limited (“the Applicant”) for a Development Consent Order (“the Order”) under section 37 of the Planning Act 2008 (“the 2008 Act”) for the Cleve Hill Solar Park and associated development (“the Development”).

1.2 The Application was accepted for examination on 14 December 2018. The examination began on 30 May 2019 and was completed on 30 November 2019. A number of changes were made to the Application during the examination. The details of these changes were made available to interested parties and were examined by the ExA.

1.3 The Order, as applied for, would grant development consent for the construction, operation, maintenance and decommissioning of an electricity generating station comprising a solar farm with the option of an additional energy storage facility with a total capacity of around 350 megawatts (“MW”). The Development would be located in Kent approximately 2km from Faversham and 5km from Whitstable within the jurisdiction of Swale Borough Council. The Development would include:

- a ground-mounted solar photovoltaic (PV) generating station with a gross electrical output capacity of more than 50 megawatts (MW) comprising arrays of panels fitted to mounting structures fixed to the ground by piles, inverters, transformers, and a network of underground cables;
- the option of an energy storage facility with a gross storage capacity of more than 50MW along with a flood protection bund, transformers, switch gear, underground cables, a construction compound and landscaping;
- a substation enclosed within a flood protection bund, with a network of underground cable circuits to connect the substation to the arrays, the storage facility and an existing substation;
- a network of cable circuits, construction compounds, landscaping, earthworks, drainage, and the undergrounding of existing overhead line;
- a means of access to an existing highway;
- habitat management areas; and
- the maintenance of an existing coastal flood defence.

1.4 Published alongside this letter on the Planning Inspectorate's National Infrastructure Planning website¹ is a copy of the ExA's Report of Findings and Conclusions and Recommendation to the Secretary of State ("the ExA Report"). The ExA's findings and conclusions are set out in Chapter 5 – 10 of the ExA Report, and the ExA's summary of conclusions and recommendation is at Chapter 13.

2. Summary of the ExA's Report and Recommendation

2.1 The principal issues considered during the Examination on which the ExA has reached conclusions on the case for development consent are set out in the ExA Report under the following broad headings:

- energy need
- landscape and visual effects;
- biodiversity and nature conservation;
- cultural heritage;
- agricultural land;
- traffic and transport;
- noise and vibration;
- socio-economic effects;
- water environment (including flooding and coastal defence);
- safety and security (particularly in respect of the proposed battery storage element); and
- compulsory acquisition.

¹ <https://infrastructure.planninginspectorate.gov.uk/projects/south-east/cleve-hill-solar-park/>

2.2 For the reasons set out in the Summary of Findings and Conclusions (Chapter 13) of the ExA Report, the ExA recommends that the Order be made, as set out in Appendix C to the ExA Report [ER 13.3].

2.3 The Secretary of State notes that the Application was amended by the Applicant during the examination to allow for:

- the consolidation of two options for the Applicant to take over from the Environment Agency the responsibility for the maintenance of existing flood defences within the boundary of the Development into a single provision contained in a deemed Marine Licence;
- the option of a standalone battery storage system was discounted in favour of a containerised Lithium-ion battery proposal; and
- the option of two access routes to the proposed development site was changed to a single route (the southern access route).

2.4 The Secretary of State further notes that the ExA accepted the changes for examination, considering that they did not result in a significant change to the proposal that was the subject of the Application.

3. Summary of the Secretary of State’s Decision

3.1 The Secretary of State has decided under section 114 of the 2008 Act to make, with modifications, an Order granting development consent for the proposals in the Application. This letter is a statement of reasons for the Secretary of State’s decision for the purposes of section 116 of the 2008 Act and the notice and statement required by regulation 31(2)(c) and (d) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (“2017 Regulations”).

4. Secretary of State’s Consideration of the Application

4.1 The Secretary of State’s consideration of the ExA’s Report is set out in the following paragraphs. All numbered references, unless otherwise stated, are to paragraphs of the ExA’s Report.

4.2 The Secretary of State has had regard to the Local Impact Reports (“LIR”) submitted by Swale Borough Council (“SBC”), Canterbury City Council (“CCC”) and Kent County Council (“KCC”), environmental information as defined in Regulation 3(1) of the 2017 Regulations and to all other matters which are considered to be important and relevant to the Secretary of State’s decision as required by section 105 of the 2008 Act (including relevant National Policy Statements). In making the decision, the Secretary of State has complied with all applicable legal duties and has not taken account of any matters which are not relevant to the decision.

4.3 The Secretary of State notes there were 867 relevant representations made in respect of the Application by statutory authorities, non-statutory authorities and local residents and businesses. Written Representations, responses to questions and oral submissions made during the Examination were also taken into account by the ExA. Unless indicated otherwise in

the paragraphs below, the Secretary of State agrees with the findings, conclusions and recommendations of the ExA as set out in the ExA's Report, and the reasons for the Secretary of State's decision are those given by the ExA in support of his conclusions and recommendations.

Need for the Development

4.4 The Secretary of State notes that, while the application is a 'Nationally Significant Infrastructure Project' as defined in sections 14 and 15 of the Planning Act 2008 by virtue of being an onshore generating station with a generating capacity of greater than 50MW, there is no National Policy Statement for energy infrastructure which explicitly covers solar powered electricity generation or battery storage such as the Cleve Hill Solar Park.

4.5 In the absence of a specific National Policy Statement that is applicable to the proposed Development, the provisions in section 105(2) of the Planning Act provide the basis for decision-making in this case and the Secretary of State must have regard to the matters detailed in that section. This includes any matters which the Secretary of State thinks are both important and relevant to his decision. The Secretary of State is aware that the Overarching National Policy Statement for Energy EN-1 ("EN-1") applies to electricity generating stations with a generating capacity of more than 50MW, although not this particular type of generating station. The Secretary of State, therefore, considers that policies in EN-1 are matters which are both important and relevant to his decision on whether to grant or withhold consent for the Development. However, he acknowledges that it is not possible to rely on the 'presumption of need' that it sets out in respect of certain specified other types of electricity generating stations.

4.6 The Secretary of State agrees with the ExA that the Development, which would comprise the construction, operation, maintenance and decommissioning of a solar photovoltaic array with either an electrical storage facility or an extension to the solar photovoltaic array, together with connection infrastructure and other Associated Development (with the solar photovoltaic array and the energy storage facility each having a generating capacity of greater than 50MW) is consistent with government policy and will contribute to the delivery of low-carbon and renewable energy, ensuring a secure, diverse and affordable energy supply in line with legal commitments to "net zero" and the need to address climate change.

4.7 The Development would also generate low-carbon electricity with a net saving in CO₂ [Greenhouse Gas Emissions] emissions over the course of its life, notwithstanding the loss of a GHG sink in the form of salt marsh within the area of the Development. The Applicant and the ExA place a great weight on this contribution to the decarbonisation of the United Kingdom's electricity generation sector.

Secretary of State's Conclusion

4.8 The Secretary of State, therefore, agrees with the ExA that substantial weight should be attributed to the contribution that the Development, insofar as it relates to the solar PV element, would make towards the identified need for additional renewable energy generation, consistent with local and national policies on sustainable development. The Secretary of State agrees with the ExA that the proposed co-located battery energy storage system to be a factor of significant additional weight [ER 5.6.2].

Landscape and Visual Effects

4.9 The Secretary of State acknowledges that this matter is of concern to many local residents. He notes that the total area of land that would be occupied by the proposed Development is around 490 hectares. However, this includes land set aside for the energy storage element of the proposal, land set aside for habitat mitigation purposes, flood defences, internal tracks and a relatively small area occupied by the existing London Array substation. The actual land area that would be covered by the solar panels is around 176 hectares.

4.10 The site of the proposed Development is described in the ExA's Report [ER 6.5.3] as being a flat and featureless coastal plain, interrupted by drainage ditches, borrow pits, reed beds and the 5-metre-high coastal flood defence bund/embankment. The site also contains a 400kV overhead line on lattice towers, a short distance of overhead line on wooden poles and the London Array substation mentioned above. The ExA notes that the 400kV line introduces incongruous vertical structures in a predominantly flat landscape [ER 6.5.5].

4.11 The solar panels themselves would rise to a maximum vertical height above the ground of 3.9 metres and would be aligned in an east-west direction (in contrast to many solar farms which orientate the arrays to the south). The Applicant has chosen the east-west alignment because it argues that, while this results in more panels being needed because the load factor is reduced, the layout offers a better electricity generation profile than south-facing panels.

4.12 Landscape and visual impacts were a major concern for many local people who made representations to the Examination. The Applicant noted that there would be significant adverse effects from the Development but considered that these would be limited to viewers over a relatively small area and would affect only a small number of receptors (although including some properties).

4.13 In considering this issue, the ExA notes [ER 6.2.1] that National Policy Statement EN-1 sets out that “[v]irtually all nationally significant energy infrastructure projects will have effects on the landscape (paragraph 5.9.8). They should be designed carefully to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate. The existing character and quality of the local landscape, how highly it is valued and its capacity to accommodate change should all be considered in judging the impact of the Proposed Development.”

4.14 The ExA states [ER 6.5.41] that “the relatively low, horizontal development is largely visually contained within the Order limits because of the enclosing influence of the existing flood defences and the topography and the vegetated character in the higher ground to the south”. The ExA also notes [ER 6.5.41] that the impacts of the Development are reversible on decommissioning (acknowledging that this might not happen for a considerable length of time – possibly 40 years).

4.15 The ExA's key conclusions on Landscape and Visual Effects [ER 6.6.1] are that: there would be no significant effects on Areas of Outstanding Natural Beauty; that there would be major and significant effects on an Area of High Landscape Value (as designated in a local development plan); in the area of the Development there would be adverse effects on landscape character, scenic value, recreational value, landscape quality and condition; rarity and representativeness. In addition, two residential properties would experience major and

significant long-term impacts on some views as would two Public Rights of Way locally, including the Saxon Shore Way.

4.16 However, the ExA also sets out that while the proposed Development has a considerable footprint, changes to views away from the immediate area would be reduced by the visual containment of the solar panel arrays within the site and, from elevated viewpoints further away, by the effect of distance, topography and the visual context. The ExA also notes that views from the Saxon Shore Way across the Swale Estuary would not be affected but walkers on that path would be aware of the Development behind them.

4.17 The ExA concludes that the adverse effects of the proposed Development on landscape and visual effects should be given moderate weight in the planning balance. However, the local nature of these impacts provides some mitigation to their scale.

Secretary of State's Conclusion

4.18 The Secretary of State notes the strength of feeling that local residents have expressed about the potential adverse impacts of the Development on the landscape of the Graveney Marshes, both through the Examination and in subsequent submissions to the Department for Business, Energy and Industrial Strategy. However, he also notes that EN-1 sets out that the nature of nationally significant energy projects means they are very likely to have a negative effect on landscape and visual perception and that these effects may be hard to mitigate. In the case of the Development, the Secretary of State considers that, while there will be adverse effects, he agrees with the ExA's assessment that these will be minimised as far as possible.

Biodiversity and Nature Conservation (see also section on Habitats Regulations Assessment at Section 5 below)

4.19 The Secretary of State notes that this issue is also of major concern to a considerable number of people who made representations to the Examination of the Application and that the ExA acknowledges that it was a major consideration in its assessment. Natural England ("NE"), the Kent Wildlife Trust ("KWT") and the Royal Society for the Protection of Birds ("RSPB") (at least initially in the case of the latter, though it subsequently deferred to NE and KWT as the process moved forward) also took part in the Examination. KWT and RSPB both objected to the proposed Development because of its potential adverse impacts on wildlife – principally in relation to a number of bird species – where they felt that adequate mitigation could not be put in place to prevent significant impacts. Those objections were sustained throughout the Examination process and the consideration of the ExA's Report (as were those from the Kent Ornithological Society).

4.20 The ExA's Report notes that relevant national and local policies were considered during the Examination. The key wildlife species that were considered during the Examination are ground nesting birds – particularly Brent geese, lapwing and golden plover – marsh harriers, dormice and European eels.

4.21 The ExA considered the information provided by the Applicant, the methodology it had used to compile the information, the proposals for mitigation and enhancement and the conclusions it had drawn in assessing the potential impacts of the proposed Development. The ExA noted that the Applicant had refined its approach as it responded to questions from the ExA and others during the Examination. [ER 7.3.1 et seq]

4.22 The ExA also recorded the Applicant's conclusions that there would be no significant adverse impacts arising from the proposed Development on ornithology or on other important ecological features either alone or in combination with other plans or projects. The Applicant concluded that the change of use from agricultural land to solar farm would mean a benefit to invertebrates as there would be no use of pesticides. [ER 7.3.16 et seq]

4.23 In considering the issues raised, the ExA noted the contents of the Local Impact Reports submitted by Swale Borough Council, Canterbury City Council and Kent County Council. The Local Impact Report from Swale Borough Council considered that "there is no certainty that effect [sic] on wildlife will be neutral or positive, or that the aims of the Development Plan policies will be met". In its Local Impact Report, Canterbury City Council stated that biodiversity impacts were a key issue. (However, the Council also noted that only the habitat management aspects of the proposed Development were located in its administrative area). Finally, Kent County Council's Local Impact Report raised concerns about impacts on ground-nesting birds and the use of the site of the proposed Development by birds from adjacent designated areas. Kent County Council suggested that habitats were managed during construction. It noted that the removal of over-wintering and breeding bird habitat was potentially the biggest loss from the proposed Development but deferred to Natural England on the detail. [ER 7.4.1 et seq]

4.24 In relation to specific issues, the ExA noted representations in respect of ground nesting birds (including lapwing, skylark and yellow wagtail), 'letters of no impediment' from Natural England in respect of water voles and great crested newts, insects (the possible use of the solar panels by aquatic insects as places to lay their eggs), the disturbance of birds by piling noise, the establishment, management and adequacy of the proposed Arable Reversion Habitat Management Area (including when it would be sown), the adequacy of the mitigation proposed, especially in relation to the capacity of the Arable Reversion Habitat Management Area to support populations of lapwing, golden plover and Brent geese. There were also concerns about the impact of the proposed Development on marsh harriers.

4.25 In relation to possible impacts on lapwing, golden plover and Brent geese, the Secretary of State notes that there was considerable discussion during the Examination about mitigation measures that might be put in place to minimise the potential impacts of the Development on these species of bird. In particular, there were discussions about the ability of the Arable Reversion Habitat Management Area to support the birds including the use of manure to fertilize the area and improve its capacity to provide the necessary food for the species. There were concerns the manure that might be used on the site would be from animals that had been given ivermectin, a chemical that inhibits worms, but which could, potentially, harm the ability of the land to be used for food supplies for the birds. While Natural England was content with the proposed mitigation measures, the Kent Wildlife Trust maintained its concern that the necessary outcome, in terms of the ability of the land to support the three bird species, would not be achieved.

4.26 As indicated, there were concerns about the impact of the Development on the ability of marsh harriers to continue to forage on the site of the Development once the solar panels were in place with consequent displacement of birds if food sources were no longer available. The Applicant's case was that the arrangement of the solar panels along with the maintenance of drainage ditches would provide suitable space for marsh harriers to continue their foraging activities once the Development was operational. While Natural England was content that the impacts of the Development on the marsh harrier population could be managed

effectively, the Kent Wildlife Trust took a different view and its concerns were sustained throughout the Examination.

4.27 In respect of potential impacts on European eels, the ExA noted that mitigation measures proposed by the Applicant were agreed with the Environment Agency as being in compliance with The Eels Regulations 2009. The Environment Agency was, therefore, content that impacts on European eels would be kept to an acceptable level [ER 7.4.78].

4.28 As far as impacts on dormice were concerned, the Council for the Protection of Rural England indicated that Hazel Dormice were present on the site of the proposed Development as determined by the discovery of a nest. The Applicant and the ExA investigated the claim but concluded that the site of the possible nest was not in an area of the proposed Development where it would be at risk from construction or operational activities and that the nest was unlikely to be a dormouse nest. [ER 7.4.79 et seq]

4.29 In its response to discussion about biodiversity and nature conservation, the ExA noted that it was content with the Applicant's approach to biodiversity surveys. The ExA was also content that, by the end of the Examination, the evidence presented to it allowed it to consider that the information requirements in relevant policy documents, including the Marine Policy Statement and National Policy Statement EN-1 had been satisfactorily met. [ER 7.5.2 et seq]

4.30 The ExA sets out that, as is expected, it has given great weight to the potential effects of the proposed Development on internationally designated sites. The ExA was satisfied that golden plover, lapwing and Brent geese from the Swale SPA and Ramsar sites would receive suitable protection from measures in the Order it recommended to the Secretary of State and the associated habitat management plans to ensure that the sites would be protected from significant effects. The ExA notes that there was general consensus (albeit with some reservation from Kent Wildlife Trust) that that was a reasonable conclusion. [ER 7.5.9]

4.31 In respect of the potential impacts on and mitigation for marsh harriers, the ExA notes that Natural England was content that the interests of the species would be protected. The Kent Wildlife Trust and other parties did not agree. On balance, the ExA was content that the proposed Development would not cause any significant adverse impacts on marsh harriers. [ER 7.5.10 et seq]

4.32 The ExA was satisfied that nationally designated sites of ecological importance – the Swale Site of Special Scientific Interest – could exist alongside the proposed Development. [ER 7.5.13 et seq]

4.33 The ExA notes that no significant impacts on locally designated sites of ecological importance were drawn to its attention. [ER 7.5.17]

4.34 The ExA was content that relevant policy requirements (including in National Policy Statement EN-1) in respect of protected species – European eels and hazel dormice – had been met. [ER 7.5.21]

4.35 The ExA notes that Kent County Council raised concerns about the loss of habitat for ground-nesting birds but considered that the impact would not be significant when considered against the benefits. The ExA, therefore, attached little weight to this matter. [ER 7.5.22]

4.36 The ExA was content that the proposed Development would provide opportunities to conserve and enhance biodiversity. [ER 7.5.23 et seq]

4.37 The ExA notes that National Policy Statement EN-1 sets out a need for mitigation and enhancement to form part of any project. The ExA notes that the original documents submitted with the Application were not clear about mitigation measures but that the Applicant produced further information to augment the initial detail. The ExA notes that the Applicant's original Environmental Statement set out the potential for significant adverse effects on three species of waterfowl associated with the Swale SPA and Ramsar site. There was a great deal of discussion during the Examination about mitigation measures that would prevent a significant adverse impact – principally through the Arable Reversion Habitat Management Area – and the steps that would be needed to sustain its 'carrying capacity' (with the use of manure generating a lot of the discussion). By the close of the Examination, there was nearly consensus (with Kent Wildlife Trust a dissenter) that the mitigation proposed was appropriate for displaced birds from the Swale SPA and Ramsar site flocks. [ER 7.5.25 et seq]

4.38 There was a range of views on whether mitigation proposed for marsh harrier would be effective. The ExA notes the lack of empirical evidence one way or another in this matter and that concerns were raised about whether the solar panels would dissuade the species from foraging. However, taking account of Natural England's evidence presented to the Examination, the ExA considers that, on balance, the mitigation measures proposed by the Applicant are sufficient to mitigate any likely significant effects. [ER 7.5.31]

4.39 The ExA was satisfied that mitigation proposals for other species – including hazel dormice and European eels – would provide suitable protection. [ER 7.5.35]

4.40 The ExA also considered whether there were any other nature conservation biodiversity issues which need to be considered during the Examination – particularly in respect of bird strike on the solar panels and the possibility of aquatic insects laying their eggs on them. The ExA accepted that there was not a great deal of information to inform its thinking – though the information that was available pointed to a low risk of bird strike or insect egg-laying scenarios. The ExA afforded little weight to these matters. [ER 7.5.38 et seq]

4.41 In conclusion, the ExA noted that biodiversity and nature conservation was a major issue for consideration during the Examination. The ExA also noted that the Applicant improved the proposed package of mitigation as the issue was progressed through the Examination, especially in respect of the Landscape and Biodiversity Management Plan. Despite some remaining concerns from some parties about their efficacy, the ExA is content that the Applicant's proposed programme of mitigation and monitoring would ensure there were no significant adverse effects from the proposed Development either on its own or in combination with other plans or projects. The ExA concludes that with the secured mitigation, the proposed Development is in accord with relevant policy requirements and there is no reason to withhold the grant of consent. Biodiversity and nature conservation is, therefore, given neutral weight in the ExA's assessment of impacts.

Secretary of State's Consideration

4.42 The Secretary of State notes the complex and technical nature of the issues considered under the biodiversity and nature conservation heading. However, the Secretary of State's own analysis of potential impacts on the Swale SPA and Ramsar sites through a Habitats

Regulations Assessment (see paragraphs 5.1 – 5.8 below) below, draws the same conclusion as the ExA in relation to protected species. The Secretary of State notes the proposed mitigation measures that would be put in place and that Natural England (though not some other consultees) accepted the positive impact these measures would have. Overall, the Secretary of State considers that the ExA's assessment of each of the issues under this heading is sound and its conclusions are robust.

Cultural Heritage

4.43 The Secretary of State notes the potential adverse impact of the Development on a number of heritage assets. He also notes this matter was a concern raised by a number of Interested Parties during the Examination. While there are no designated cultural assets within the site of the proposed Development (there is an undesignated World War II pill box), there are a number of assets whose 'setting' (the surroundings in which a heritage asset is experienced) would be affected.

4.44 The Applicant identified significant effects on All Saints Church, Graveney (Grade 1 listed), Graveney Court (Grade 2), Sparrow Court (Grade 2) and the Graveney Church Conservation Area which lie within 1 kilometre of the site boundary for the proposed Development. The Applicant also identified further heritage assets within 5 km of the site boundary - ten grade 1 listed buildings, 34 grade II* listed buildings, 534 grade II listed buildings, 13 scheduled monuments, one grade II Registered Park and Garden, and 15 conservation areas – but predicted that there would be no significant effects on those [ER 8.1.18 – 8.1.19].

4.45 Swale Borough Council agreed with the Applicant's assessment that there would be no direct impact on heritage assets and with the assessment of significant effects as set out above. The Graveney Rural Environment Action Team ("GREAT" – which represents Graveney residents opposed to the proposed Development) and Kent County Council felt that the impacts of the proposed Development would be greater than those identified by the Applicant. GREAT suggested other historic sites that should be considered in Examination.

4.46 In considering the arguments about impacts on heritage assets, the ExA assessed the requirements and advice set out in the National Policy Statements, the National Planning Policy Framework and in relevant legislation (The Infrastructure Planning (Decisions) Regulations 2010).

4.47 The ExA considered the position in relation to the specific heritage assets that the Applicant, GREAT and Swale Borough Council had assessed would be significantly impacted by the Development and concluded:

- All Saints Church, Graveney – the solar panels closest to the Church would be 500 – 600 metres distant. Mitigation planting might provide some help but the proposed Development would "seriously erode the rural character of the area and the contribution of setting to the significance of All Saints Church" [ER 8.1.40 et seq]. The ExA concluded that the less than substantial harm should be weighed as moderate in the planning balance;
- Graveney Court – a house with 15th Century origins which owes its significance to its special historic and architectural interests and its setting alongside All Saints Church. The ExA concluded that, as with the Church, the less than substantial harm should be weighed as moderate in the planning balance [ER 8.1.44];

- Sparrow Court – the southern boundary of the proposed Development site would be located some 250 metres from the Court - a farmhouse with 15th Century origins. Its significance derives from its special architectural interest and historic links with the Church and Graveney Court. Despite some vegetation cover, the siting of the solar panels would erode the open landscape from which the Court, in part, derives its significance. The ExA concludes that this would be less than substantial harm with moderate weight in the planning balance [ER 8.1.45 et seq].
- Church of St Thomas the Apostle, Harty – this small and isolated church would lie about 2km north of the proposed development site across the Swale Estuary. There would be views from the Church across to the proposed Development but the solar farm would appear relatively small in extensive surroundings. The ExA references the Applicant’s view that the existing sea wall around the site of the proposed Development would substantially screen the solar farm from the Church leaving a band of silver above the sea wall while elements of the proposed Development higher up would be seen against the backdrop of the existing substation for the operational London Array offshore wind farm. The ExA concludes that less than substantial harm would result from the proposed Development [ER 8.1.47 et seq].
- The Shipwright Arms – much of its historic interest is linked to its remote location and links to the Faversham and Oare Creeks. The coastal defences on the north east side of Faversham Creek would offer substantial screening of the solar panels, the impact of which would be insufficient to amount to harm [ER 8.1.52].
- Other listed buildings – the Applicant identified a number of heritage assets within 5km of the proposed Development but detailed assessments were carried out only on those sites within 1km following consultation with Kent County Council and Historic England. The ExA also viewed four other heritage assets which had been suggested by GREAT as it felt they had been omitted from the list of sites assessed by the Applicant in its application (although it recognised that there were limitations in its approach). The ExA concluded that the impact of the proposed Development was so minor that it would not harm the significance of the heritage assets. [ER 8.1.53 et seq]
- Graveney Church Conservation Area – a small, isolated, group of buildings which are linked to Graveney Church and Graveney Court. Though the proposed Development would have an adverse impact on the significance of the Church and the Court, the overall effect on the conservation area would be more benign. The ExA concludes there would be less than significant harm.
- Other heritage assets – there are a number of conservation areas in neighbouring towns. None of these would be affected by the proposed Development. As indicated above, there is a World War II pill box within the site of the proposed Development. While, there would be no physical change to the pill box (other than it being used as a bat roost), the ExA finds that its significance would be diminished and that this carries moderate weight in the planning balance.

4.48 In respect of ‘historic landscape character’, the ExA finds that the proposed Development would dilute the essence of the grazing marshes although retention of the

drainage ditches would retain the historic legibility of the landscape. The ExA concludes that this matter should be given moderate weight in the planning balance.

4.49 The Secretary of State notes the ExA's conclusions [ER 8.1.64 et seq] that there would be harm to the setting of All Saints Church, Graveney, Graveney Court, Sparrow Court, the Church of St Thomas the Apostle at Harty and the Graveney Church Conservation Area but that in individual and cumulative terms, this would be less than substantial. There would also be moderate harm to historic landscapes and a loss of significance of the World War II pill box. The ExA acknowledges the weight that adverse impacts on cultural heritage carry in relevant policies (including EN-1) but concludes that, overall, the harm identified must be weighed against the wider benefits of the proposed Development.

Secretary of State's Conclusion

4.50 Having given this matter consideration, the Secretary of State notes the adverse impacts that have been identified on cultural heritage assets and that these are of concern to many local people. However, the Secretary of State agrees with the ExA in respect of the weight the adverse impacts should carry in the planning balance.

Agricultural Land

4.51 The Secretary of State is aware that EN-1 sets out that nationally significant energy infrastructure projects should aim to minimise impacts on best quality agricultural land (classified as Grade 1, 2 and 3a under the Agricultural Land Classification ("ALC")) and should instead use land of poorer quality (Grade 3b, 4 and 5 under the ALC). In addition, the National Planning Policy Framework sets out that development should contribute to the protection of soils and respect the economic benefits of the most valuable categories of agricultural land. [ER 8.2.2 et seq]

4.52 The Secretary of State notes there was considerable discussion during the Examination about the classification of the land on which the proposed Development would be located – the matter had been raised in a number of representations submitted to the Planning Inspectorate.

4.53 Swale Borough Council's Local Plan seeks to prevent development on agricultural land unless there is an overriding need that cannot be met elsewhere. The Development Plan sets out restrictions on the development of better quality land, including that classified as 3a under the ALC [ER 8.2.4]

4.54 The Applicant assessed that the proposed Development would affect approximately 370 hectares of arable land of which 2 hectares would be ALC grade 2, 9 hectares of ALC grade 3a and 360 hectares of ALC grade 3b (approximately 97% of the site). [ER 8.2.7]

4.55 Swale Borough Council accepted that more than 90% of the land would be ALC grade 3b but questioned whether any agricultural land should be used for solar power as opposed to rooftops and brownfield land. [ER 8.2.12]

4.56 Arguments were put to the Examination by an Interested Party – Dr Erasin – who contended that the Applicant's assessment of agricultural land quality was flawed and that a far higher proportion of the site of the proposed Development should be classified as being of higher ALC grading than that stated. The Applicant, Dr Erasin and the ExA engaged in a number of

exchanges during the Examination to allow a considered view of the positions adopted by the respective parties to emerge. [ER 8.2.13 et seq]

4.57 After considering the exchanges between the parties, the ExA concluded that Dr Erasin had misunderstood the approach that was taken by the Applicant and that the ALC assessment presented to the Examination by the Applicant was reliable. The ExA's overall conclusion in respect of Agricultural Land was that the vast majority of the land that would be used for the proposed Development is of ALC grade 3b. The proposed Development was, therefore, in accordance with the relevant policy set out in EN-1 and little weight should be given to the loss of agricultural land in the planning balance. [ER 8.2.33]

Secretary of State's Conclusion

4.58 The Secretary of State notes the conflicting views during the Examination about how the land that would house the Development should be classified in terms of its agricultural potential. The Secretary of State further notes that the ExA concludes that the vast majority of the land to be used for the project would be in Agricultural Land Category 3(b) and that the test in EN-1 in relation to the use of agricultural land for NSIPs has been met. He sees no reason to disagree with the ExA's analysis of the issues raised in relation to this issue. He considers that little weight should be given to the loss of agricultural land in the planning balance.

Traffic and Transport

4.59 The Secretary of State notes that this was another matter which raised concerns among local residents with particular focus on the potential impacts of an increase in traffic movements, especially Heavy Good Vehicles, during the construction of the Development.

4.60 National Policy Statement EN-1 sets out that transport impacts related to national significant energy infrastructure are an important consideration in assessing applications for development consent. EN-1 also sets out mitigation options to minimise impacts from traffic and transport related to nationally significant energy infrastructure projects and recommends that where the project in question is likely to generate a large increase in HGV movements, then measures to limit impacts should be included in any Order that might be granted [ER 8.3.4].

4.61 The ExA records the National Planning Policy Framework as requiring Applicants to consider transport issues at an early stage in the proposal, but notes that "*Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe*". [ER 8.3.6]

4.62 The ExA also notes that both the Swale Borough Council and Canterbury City Council Development Plans contain provisions in relation to assessment of traffic impacts that place great store on maintaining the safety of road users and preserving the character of rural lanes in particular [ER 8.3.7 et seq].

4.63 Swale Borough Council's Local Impact Report noted that there would be long periods where construction traffic would affect residents, including at weekends [ER 8.3.33]. It also noted that the route that would be used by construction traffic was popular with cyclists and that this would result in harm in relation to road safety and recreational amenity. The main construction traffic route would be along what were defined as rural lanes and the impacts of this would mean that policy DM 26 of the Swale Borough Local Plan would not be met.

Canterbury City Council's Local Impact Report indicated no adverse effects for the network of roads within its area. [ER 8.3.35]

4.64 Kent County Council's Local Impact Report indicated [ER 8.3.36] that the operation of the proposed Development would result in few road traffic movements. The Report also set out that the Applicant had assessed the appropriate impacts from HGV activity associated with the construction of the proposed Development. Finally, the Report set out that the Council was satisfied that the impacts of traffic movements during construction (and decommissioning) could be mitigated through the Construction Transport Management Plan submitted by the Applicant as part of its Application.

4.65 Kent County Council's Statement of Common Ground with the Applicant indicated that it agreed with the Applicant on all traffic and transport issues – including the proposed mitigation. [ER 8.3.38]

4.66 The Applicant provided information about traffic and transport assessments in the Environmental Statement submitted with the Application. A pre-Application scoping opinion from the Planning Inspectorate indicated that significant traffic and transport effects during operation of the proposed Development were not likely and so a detailed assessment of traffic movements during this phase of the development was not needed. The Application also proposed that a number of mitigation measures should be agreed with relevant local planning authorities as part of any Construction Traffic Management Plan or Construction and Environmental Management Plan and included provisions for these in a draft Order submitted as part of the Application [ER 8.3.12 et seq].

4.67 The Applicant assessed that the transport and traffic impacts of the proposed Development would be slight at worst [ER 8.3.29].

4.68 There was considerable discussion during the Examination about the potential for impacts on: the road network in the vicinity of the proposed project – particularly where used by HGVs during the construction phase of the proposed Development; the safety of pedestrians, cyclists and other road users; school children attending the Graveney Primary School which lies on the route to be used by construction traffic; and, the wider local population from emissions produced by the construction traffic. There was also an issue raised about the inconvenience that would be caused by construction traffic to local people and businesses using the local road network. There was also consideration of a suggestion by an Interested Party that the Applicant had exaggerated the number of existing HGV movements along the proposed construction corridor in its pre-Application survey work.

4.69 The ExA noted that Kent County Council was content with the Applicant's approach to the consideration of traffic and transport matters and concluded that the evidence provided by the Applicant could be relied upon in considering them. [ER 8.3.50]

4.70 The ExA noted the Applicant's proposed mitigation measures for HGV impacts, including restrictions on when deliveries can be made to the construction site, speed restrictions and plans for holding such vehicles in suitable locations when they are ahead or behind the specified timing restrictions. The ExA records that there would be requirements for highways conditions surveys in the Construction Traffic Management Plan and that it was content with these requirements. [ER 8.3.52 – et seq]

4.71 The construction would require that five abnormal indivisible loads (loads which cannot be split and which do not comply with normal legal requirements regarding weight and size) would have to be taken to the site of the proposed Development along the relevant transport routes. The ExA considers that the mitigation measures to secure the safety of all road users and limit the effect of the small number of such movements that would form any approved Construction Traffic Management Plan would minimise any adverse impacts. [ER 8.3.62 et seq]

4.72 The Examination considered a disagreement between the Applicant and an Interested Party about the width of two local roads that would carry construction traffic to and from the site of the proposed Development. The Interested Party considered that the Applicant had overstated the width of the carriageway and that the narrower carriageway would increase the potential for traffic blockages. The ExA notes that Kent County Council's view was that even if the Interested Party was correct in its measurements, this did not alter the Council's view about the suitability of the route for construction traffic. The ExA concluded that the width of the road, irrespective of specific measurements, would allow a reasonable movement of construction traffic and other vehicles and while there would be some delays to local users, this would not result in significant inconvenience to road users. [ER 8.3.66 et seq]

4.73 The ExA visited the area around the proposed Development on an unaccompanied site visit and noted particular aspects of relevance to transport and traffic matters, including the location of Graveney Primary School and the nature of the roads themselves. The ExA considered the suitability of the local roads to accommodate a large number of Light Goods Vehicle and HGV traffic during the construction phase of the proposed Development.

4.74 The ExA sets out the relevant predicted construction traffic flow information arising from the proposed Development [ER 8.3.71]. The ExA records that daily total construction traffic movements would peak during week 100 at 222 (i.e. 111 vehicles in and out), comprising 162 Light Goods Vehicle movements and 60 HGV movements. Peak HGV flows would be 80 movements per day for four weeks around week 27. Overall, the average number of daily movements would be 62 HGVs and 90 LGVs. The ExA concludes that, on balance, whilst recognising the rural nature of the roads, it is content that the mitigation measures and methods of monitoring and management in the outline CTMP would be effective in minimising adverse effects such as delays, severance, fear and intimidation. No permanent, significant harm to the character of the rural lanes is likely given the temporary nature of the construction traffic.

4.75 In respect of the safety of pedestrians and cyclists along the construction traffic route, the ExA notes there would be restrictions in the Construction Traffic Management Plan on when HGVs would be allowed to deliver to or depart from the site of the proposed Development (to coincide with the start and finish of the school day). The ExA also finds that, while noting the playing field for Graveney Primary School is on the opposite side of the road from the school buildings, this would be acceptable with supervised crossing of the road.

4.76 For pedestrians more generally, the ExA notes that while the construction routes do not generally have pavements, the number of pedestrians is low and that large lorries already use the routes. While the construction of the proposed Development would lead to an increase in traffic, this would not be so great as to affect pedestrian safety or their ability to cross the roads in question.

4.77 Public rights of way across the site of the proposed development would be kept open if safe and practicable to do so and this would be secured in Requirement 12 of the ExA's recommended Order.

4.78 In terms of the safety of cyclists, the Applicant sets out that most cycling activities along the construction route would take place outside the main construction traffic peak period (from 9.30 to 15.30 on weekdays). In addition, mitigation measures in the Construction Traffic Management Plan would reduce impacts. The ExA notes that the impacts of construction would be over a two year period and would, therefore, be temporary.

4.79 In respect of air quality issues arising from transport and traffic effects, The ExA notes that pollution in the areas surrounding the site of the proposed Development would increase as a result of dust and exhaust fumes from onsite vehicular activities and from construction vehicle access. However, the ExA considers that this increase in pollution is in relation to an existing low base so with mitigation, there would be no significant effects. [ER 8.3.79 et seq]

4.80 After considering all the issues raised by the parties, the ExA stated that the impacts of traffic and transport were an important consideration in the Examination of the Application with many representations submitted about it. The ExA was satisfied that the main source of any impacts would be during the construction of the proposed Development rather than during its operation and that a detailed assessment of the latter was not required. The ExA sets out that it was satisfied that appropriate mitigation would be put in place to ensure there would be no significant residual impacts arising from the proposed Development. The ExA also assessed that impacts during the decommissioning of the proposed Development [potentially in 40 years time] would be no worse than those likely to arise during construction. [ER 8.3.86 et seq]

4.81 The ExA's overall conclusions were that the temporary but significant effects of the proposed Development during construction would be mitigated to an acceptable level by measures in the Construction Traffic Management Plan which would meet the relevant provisions in National Policy Statement EN-1 for energy NSIPs. In the same way, the proposed Development would be in accordance with relevant local plans in respect of road user safety and the absence of any permanent damage to the character of rural lanes. Again, the absence of any significant impacts mean that the provisions of the National Planning Policy Statement have been met. The ExA's overall conclusion is that traffic and transport do not weigh heavily against the Order being made though the temporary effects on the local population are a minor negative effect to be weighed in the planning balance. [ER 8.3.90]

Secretary of State's Consideration

4.82 The Secretary of State notes the potential for significant effects to arise from traffic and transport impacts related to nationally significant energy projects. He also notes that in the case of the Development, impacts would arise throughout the duration of the construction programme with some additional impacts during its operation. However, he identifies that there will also be mitigation measures put in place to minimise those impacts as much as possible. Overall, the Secretary of State agrees with the ExA's conclusion that the effects identified do not weigh heavily against the Order being made.

Noise and Vibration

4.83 The ExA considers the potential noise and vibration impacts of the proposed Development against the particular policy provisions in the National Policy Statements for Energy, EN-1 and EN-5, which acknowledge that excessive noise can have adverse impacts on human health and quality of life. The ExA also looked at the Swale Borough Council and Canterbury City Plans for their policy proposals.

4.84 The scope of the Applicant's noise assessment was agreed with Swale Borough Council which both seek to avoid or minimise harm from noise impacts.

4.85 The Applicant's assessment of the potential impacts of noise and vibration covered the construction, operation and decommissioning phases of the development's life cycle. The main effects during the construction phase were anticipated to be from piling of the posts that would support the solar panels and transformers and vehicle noise on site noting that daytime noise criteria would be exceeded for no more than one month at the closest point to each receptor. Vibration levels were assessed as being less than perceptible while noise increase from traffic movements on local roads would be minor. The Applicant considered that these effects would not be significant.

4.86 As far as operational impacts were concerned, the Applicant assessed that some daytime and night-time noise limits would be exceeded by noise from the installed plant and there would be significant impacts on the small number of properties affected. The decommissioning impacts were assessed as being similar to those that would arise during construction.

4.87 The ExA notes that mitigation measures would be incorporated into the Construction Environment Management Plan and the Construction Traffic Management Plan and that the Applicant concluded that there would be no significant effects at the properties included in its assessment of impacts. [ER 8.4.25]

4.88 The Swale Borough Council Local Impact Report set out that the predicted noise levels would not lead to complaints. Canterbury City Council's Local Impact Report referred only to the importance of maintaining natural vegetation to provide sound screening. [ER 8.4.33 et seq]

4.89 The ExA notes that noise and vibration were raised by several Interested Parties to the Examination as being of concern including about the way the Applicant had assessed noise impacts in its noise impact methodology. The Graveney Environment Rural Action Team sought its own assessment of the Applicant's methodology. The ExA also notes that in the Statements of Common Ground signed between the Applicant and Swale Borough Council and the Applicant and Canterbury City Council, the Councils confirmed that the Applicant's approach to methodology, assessment, the identification of receptors and proposed mitigation was acceptable. [R 8.3.37 et seq]

4.90 The ExA states that it carefully considered issues raised by Interested Parties. The ExA noted that piling activities would lead to instances of noise exceeding daytime noise criteria at eight properties in the vicinity of the proposed Development. However, the ExA further notes this this would represent a worst case and that the exceedances would be by only a small amount. [ER 8.4.41 et seq]

4.91 In considering the piling impacts, the ExA noted that they would take place over four week periods for each field of solar panels and that this would limit the duration of any adverse events, but that even within this period, the piling would move away from sensitive areas and so the impacts would actually occur over a period of less than four weeks for any receptor. [ER 8.4.44]

4.92 The ExA also notes that vibration levels from on-site activities would be below noticeable levels except at one property – Warm House. However, it was possible that the rolling of some of the stone roadways used with the boundary of the proposed Development could also be noticeable at could also be noticeable at one other property – 4 Crown Cottages. [ER 8.4.45]

4.93 Overall, the impacts during construction would be limited – only just exceeding thresholds – and be of short duration. [ER 8.4.46]

4.94 During operation, noise levels would be above daytime criteria for some properties so further mitigation measures would be needed to alleviate any impacts. The ExA considered that the Construction Environment Management Plan and the Construction Traffic Management Plan, which would be secured in any Order that the Secretary of state might issue, would provide adequate mitigation. The ExA, therefore, agreed, with the Applicant’s conclusions on impacts. [ER 8.4.46 et seq]

4.95 The ExA considers that the decommissioning of the proposed Development would generate similar impacts to those produced during construction. With mitigation measures in place, the ExA agrees with the Applicant’s assessment of impacts. [ER 8.4.56]

4.96 In conclusion, the ExA considers that mitigation measures would be acceptable to alleviate any significant adverse impacts. The ExA concludes that overall, the construction impacts of the proposed Development would be temporary, that the adverse noise and vibration during operation can be mitigated and so be in compliance with EN-1 and EN-5, that the proposed Development would be compliant with the National Planning Policy Framework and with the Swale District and Canterbury City Local Plans. The ExA’s final analysis is that noise and vibration do not weigh against the Order being granted and are neutral in the planning balance. [ER 8.4.56 et seq]

Secretary of State’s Conclusion

4.97 The Secretary of State notes the potential for impacts to arise from the Development during both construction and to lesser extent operation (although there would be another increase during decommissioning). The Secretary of State notes that the ExA considers operational noise mitigation measures and includes CEMP and the CTMP in the package of measures to mitigate impacts. The Secretary of State considers that these measures are more appropriate to construction impacts and effects on wildlife. However, the Secretary of State agrees with the ExA that an Operational Noise Assessment will need to be agreed with the local planning authority before development can commence and is satisfied that this process will provide suitable mitigation for impacts arising from operational noise.

Socio-Economic Effects

4.98 This analysis covers a broad range of issues - the social, economic and land use effects of the Proposed Development, which includes tourism; recreation; land use; employment; human health; public access; health and safety at work; electric, magnetic and electromagnetic fields; telecommunications; television reception; and utilities and waste issues. [ER 8.5.1]

4.99 The ExA considered the proposed Development against the policies set out in the National Policy Statement EN-1, in the National Planning Policy Framework and in the Development Plans for Swale Borough Council and Canterbury City Council. [ER 8.5.3 et seq]

4.100 The Applicant set out that, in its view, there would be positive, though not significant, increases in local employment while there would be minor negative impacts on tourism during construction and operation of the proposed Development. [ER 8.5.15]

4.101 The Applicant assessed that there would be significant effects on users of the Saxon Shore Way during construction operations but this would affect only a short section of the route, be temporary (for a period of twelve months) and only when those operations were taking place within 500 metres of the route. Also, construction would not take place after 13.00 on Saturdays and not at all on Sundays or Bank Holidays. [ER 8.5.16]

4.102 During the operation of the proposed Development, it was predicted that there would be a significant adverse effect on a public right of way (ZR485) though impacts on other public rights of way were assessed as being not significant. [ER 8.5.17]

4.103 The Applicant concluded that there would be no significant cumulative effects on the socio-economics of tourism in Swale Borough, the City of Canterbury or Kent more generally arising from the proposed Development. [ER8.5.18] In addition, the Applicant concluded that no significant effects had been identified in relation to human health, electric, magnetic and electro-magnetic fields, telecommunications, TV reception, utilities or waste management. [ER 8.5.19]

4.104 The Applicant stated that mitigation measures had been incorporated into the design of the proposed Development. [ER 8.5.20 et seq]

4.105 The Applicant's Equality Impact Assessment considered whether the impacts of the proposed Development would discriminate against people with characteristics defined in the Equality Act 2010. It concluded that there was the potential for impacts from the traffic and access during construction in relation to children attending the Graveney Primary School (which sits alongside the construction traffic route) but that mitigation in the Construction Traffic Management Plan would minimise the potential for inequality or discrimination. [ER 8.5.25]

4.106 The ExA noted that socio-economic issues were raised in many relevant representations with the main areas of concern being impacts on footpaths (Public Rights of Way), the local economy, tourist numbers, human health and wellbeing, and the loss of agricultural land. The absence of any direct local benefit arising from the proposed Development was also raised. [ER 8.5.26]

4.107 Swale Borough Council's Local Impact Report noted that the proposed Development was not seeking to obstruct any Public Rights of Way but assessed that potential

impacts on tourism and on the economy through reduced visitor numbers would mean it would not be in compliance with parts of the Borough's Local Plan in respect of tourism and recreational activities. Canterbury City Council's Local Impact Report set out that the proposed Development would have limited economic benefit. Kent County Council's Local Impact Report considered the proposed Development would transform the character of the landscape from arable to industrial and deter the use of Public Rights of Way. [ER 8.5.28 et seq]

4.108 Kent County Council did, however, welcome the Applicant's proposed permissive path that would connect Public Rights of Way ZR488 and ZR484 but was also keen to see the creation of a new off-road path between existing footpaths, CW90 and CW95 included in the proposed Development. [8.5.34 et seq]

4.109 The ExA notes that a considerable number of representations were submitted throughout the Examination in relation to potential socio-economic impacts arising from the proposed Development. Some of these representations related to the methodology used by the Applicant in assessing impacts or omissions in the information provided to assess impacts. There were also concerns about the loss of recreational space on physical and mental well-being of local residents and on visitor numbers to the area (which would have consequential impacts on local businesses). There were concerns that the proposed development would bring no benefits to the local economy. The potential for health impacts arising from electromagnetic fields, the potential security issues and the Applicant's Equality Impact Assessment were also raised.

4.110 There was discussion about improvements to existing cycle routes and proposals for new cycling routes. The use of agricultural land for solar energy farms was also raised.

4.111 The ExA considered all these issues with the Applicant and Interested Parties.

4.112 In respect of economic benefits, the ExA considered the Applicant's contention that the proposed Development had the potential to create 750 Full Time Equivalent jobs in Kent and 4,725 in England and would generate £120 million Gross Value Added in Kent and £670 million in England. The ExA noted that a requirement for a Skills, Supply Chain and Employment Plan would secure local benefits. However, the ExA's overall assessment was that it agreed with the Applicant's analysis that there would be no significant positive economic effect in the region. [ER 8.5.54 et seq]

4.113 On tourism, the ExA noted figures for tourist visits to the Swale region and the income it generated which had been provided by the Applicant. The ExA concluded that while there would be impacts arising from the construction of the proposed Development, these would be temporary and would not be in one fixed place through the construction programme. The ExA considered that there was the possibility that the economic impacts of spending by construction workers working on the proposed Development would offset any impacts from loss of visitor numbers. The ExA's overall conclusion was that, while acknowledging the importance of visitors to the region, it had seen no evidence that the proposed development would lead to a reduction in visitor numbers. [ER 8.5.57 et seq]

4.114 In respect of recreational amenity, the ExA notes that there were proposals from the Applicant to upgrade a number of Public Rights of Way in and around the site of the proposed Development. The ExA did consider that there would be adverse impacts on recreational users of the footpaths in the area in the form of a loss of recreational amenity but that these would be temporary and reversible. The ExA also notes the mitigation measures proposed in the

Applicant's Public Rights of Way Management Plan which would be appended to the Construction Traffic Management Plan. As far as cyclists were concerned, the ExA noted that a proposal for improvements to a cycle route fell outside the Application and could not, therefore, be given any weight in the planning balance. [ER 8.5.64 et seq]

4.115 As far as land use issues were concerned, the Applicant's proposal would see 370 hectares of arable crop production be taken up with solar panels and sheep grazing of which 97% would be graded 3(b) under the Agricultural Land Classification. Land around or under the panels would be seeded with grass and wildflower mix which would be grazed by sheep. The ExA considers this would improve biodiversity. The ExA concludes that the proposed Development would not result in any significant land use effects. [ER 8.5.78]

4.116 The ExA notes that matters related to human health were of concern to Interested Parties. However, the ExA is satisfied that a package of mitigation measures in the Construction Traffic Management Plan and the Construction Environmental Management Plan would minimise any risks to local people or contractors working on the site of the proposed Development. The ExA was also satisfied in relation to other matters raised by Interested Parties in relation to human health that suitable mitigation would be put in place – through the Construction Traffic Management Plan and the Construction Environmental Management Plan and the Battery Safety Management Plan – to avoid negative impacts on the health and well-being of local people. [ER 8.5.82 et seq]

4.117 On equality issues, the ExA noted that the Applicant's Equality Impact Assessment recorded that construction traffic for the proposed Development had the potential to result in inequality and discrimination to pupils at Graveney Primary School. However, the ExA notes that there is already in place a footbridge which links the school car park with the school to obviate the need for pupils and their parents to cross the construction route. While this bridge would not allow access to the school playing fields from the school, the ExA is satisfied that the frequency of HGV traffic along the construction route is not of such a magnitude as to make supervised crossing of the road to be unsafe. Mitigation measures in the Construction Traffic Management Plan and the presence of the existing footbridge would minimise the potential for discrimination and inequality to the children. [ER 8.5.86 et seq].

4.118 The ExA notes a particular issue in respect of a family whose home faces the construction route and backs on the site of the proposed Development. The ExA considered the matter carefully in the light of representations made by the family and the Applicant. The ExA notes that the Applicant has proposed mitigation measures to minimise the impacts and has stated that it will continue dialogue with the family. The ExA takes the view that it is content with the proposed mitigation measures – there is no evidence that they will not be appropriate – put forward by the Applicant. [ER 8.5.91 et seq]

4.119 The ExA's overall conclusions on socio-economic impacts are that these were significant impacts for consideration in the Examination. The Applicant had considered all relevant potential impacts under this heading and the Application therefore met the relevant provisions in National Policy Statement EN-1 for energy NSIPs. The mitigation measures put forward by the Applicant also ensure the application met the relevant provisions with National Policy Statement EN-1.

4.120 In terms of conclusions on specific socio-economic issues arising from the proposed Development, the ExA notes the minor economic benefits, the minor and reversible impacts on tourism and the mitigation measures which would mean inequality and discrimination would be

minimised. In addition, the ExA concludes that there would be harm to users of a number of Public Rights of Way near or running through the site of the proposed Development. Finally, the ExA considers the proposed Development would accord with the relevant local plan as far as safeguarding tourism and providing some local employment opportunities. The ExA's overall conclusion is that the impacts identified are of limited harm and this position is carried into the final planning balance.

Secretary of State's Conclusions

4.121 The Secretary of State notes the sensitivities of some of the issues raised under this heading, particularly in respect of potential impacts raised in respect of his consideration of the Public Sector Equality Duty. He further notes the ExA's conclusions on these and other Socio-Economic impacts that were considered during the Examination and the range of concerns that were expressed by Interested Parties. While acknowledging these views, the Secretary of State sees no reason to disagree with the ExA's conclusion in this matter. The Secretary of State's Public Sector Equality Duty considerations are set out in more detail in section 8 below. [ER 8.5.96 et seq]

Water Environment [Flooding and coastal defences]

4.122 The questions of the susceptibility of nationally significant energy infrastructure to flood risk and whether such infrastructure could cause or aggravate flooding are matters covered in the National Policy Statement EN-1 and in the National Planning Policy Framework. Changes to water quality resulting from nationally significant energy infrastructure are also subject to policy drivers. In addition, the Swale Borough and Canterbury City Development Plans are also relevant to consideration of the Application as is the Medway Estuary and Swale Strategy (which sets out a strategy for managing flood and coastal erosion risk over a 100 year period and includes a specific proposal for coastal realignment at Cleve Hill). [ER 8.6.2 et seq]

4.123 The Applicant's case in relation to water environment was that with mitigation measures in place there would be no adverse impacts arising from the proposed Development either alone or in-combination with other plans or projects. The Applicant recorded that there would be a potential improvement in surface water quality at the site of the proposed Development because of a reduction in the use of pesticides and fertilisers. The Applicant's Flood Risk Assessment set out that the site of the proposed Development lies in Flood Risk area 3a, that is land which has a 1 in 100 annual probability of river flooding year risk or 1 in 200 annual probability of sea flooding. However, the Applicant's Flood Risk Assessment concluded that the existing flood defences around the site would protect it up to the 1 in 1,000 year event. [ER 8.6.16 et seq]

4.124 The Applicant is seeking powers in the Order to take over the maintenance of the flood defences from the Environment Agency. The Applicant proposes to undertake such activities if the proposed Development went ahead. [ER 8.6.19]

4.125 The Applicant also submitted that the solar arrays and the related transformers and connecting cables had been designed with additional above ground clearances to ensure that they were able to withstand a 1 in 1,000-year wave overtopping event. Given these design features, the Applicant considered the risk from tidal flooding to be low. The Applicant also took the same view in relation to risks from river, rain and groundwater flooding concluding that these would be negligible. [ER 8.6.22]

4.126 The Applicant's Flood Risk Assessment applied both the 'exception' and 'sequential' tests to the proposed Development as required by EN-1 and the National Planning Policy Framework and concluded that it passed both. The ExA asked whether the latest information on predictions of climate change impacts had been used to model impacts. The Environment Agency confirmed that appropriate data had been used to support the Flood Risk Assessment and that it did not need updating. [ER 8.6.25]

4.127 The Environment Agency and the Applicant submitted a joint paper which set out how the ongoing maintenance of the flood defences would be undertaken in the event the proposed Development went ahead and gave an analysis of why the powers to protect the Development during its operation would be needed. The joint paper also explained the marine licensing position in relation to those maintenance works below Mean High Water Mark. The Marine Management Organisation queried why there was no assessment of likely significant effects in the Environmental Statement submitted with the Application. The Applicant explained that there would be no change to the baseline so it was not necessary to undertake such an assessment. The Applicant also explained that in the event any more extensive works were needed in the future, then it would take these forward under separate consent processes. [ER 8.6.27 et seq]

4.128 The Environmental Statement submitted by the Applicant set scenarios included in the Medway Estuary and Swale Strategy at a draft stage and exchanges with the Environment Agency about the managed retreat of the coastline at the site of the proposed Development. The Environmental Statement noted that the Environment Agency had taken the presence of the proposed Development into account in finalising the Medway Estuary and Swale Strategy.

4.129 The ExA notes that many representations raised concerns about the potential flooding and coastal defence risks and about the responsibility for maintaining the flood defences being transferred from the Environment Agency to the Applicant. [ER 8.6.30]

4.130 The ExA noted that the site of the proposed Development was of strategic importance to the Medway Estuary and Swale Strategy which aims to protect 17,000 homes in its area over a 100 year life cycle. The Cleve Hill site is one of eight that would collectively meet this obligation. The lifetime of the solar park would be 40 years and the proposed delivery programme in the Medway Estuary and Swale Strategy had been adjusted to delay the managed re-alignment of the site from 2039 to 2069. [ER 8.6.31]

4.131 The Environment Agency was content that future maintenance of the flood defences could be passed to the Applicant. The Environment Agency also agreed that the flood mitigation measures included in the design of the proposed Development were suitable. [ER 8.6.32]

4.132 The Marine Management Organisation had discussions with the Applicant about its decision to include powers for maintaining the flood defences in its draft Order. The Marine Management Organisation suggested that a deemed Marine Licence would be the most appropriate way to deal with those parts of the proposed Development – the flood defences – that extended below the Mean High Water Mark rather than pursuing an option transferring existing Marine Licence exemptions held by the Environment Agency to the Applicant. The signed Statement of Common Ground between the Applicant and the Marine Management Organisation reflected that position and amended wording for the deemed Marine Licence was also subsequently agreed. [ER 8.6.33 et seq]

4.133 Flood risk was mentioned in the Local Impact Reports for both Canterbury City Council and Kent County Council (the lead local flood authority) with the former indicating the key issue was flood risk in its area and the latter noting that the proposed Development could lead to an increase in flood risk elsewhere. Kent County Council's Local Impact Report also highlighted the need for an effective mitigation strategy to deal with surface water run-off to avoid sedimentation of watercourses. [ER 8.6.36]

4.134 Several of the Interested Parties disagreed with the Applicant's Flood Risk Assessment and there were concerns about potential flood impacts in Faversham and Whitstable. In addition, concerns were raised about responsibility for maintaining the existing coastal flood defences passing from the Environment Agency to the Applicant. [ER 8.6.38]

4.135 The Applicant argued that the managed realignment set out in the Medway Estuary and Swale Strategy would increase the flood risk at Faversham rather than decrease it. The Applicant submitted the Medway Estuary and Swale Strategy into the Examination. [E 8.6.39]

4.136 The ExA notes there were representations made to the Examination about the opportunity cost of cancelling or delaying the Medway Estuary and Swale Strategy's approach to managed retreat at the Cleve Hill site in respect of flood relief, carbon sequestration and ecosystem services. In response to the point about carbon sequestration, the Applicant set out that data in the Environmental Statement predicted that there would be a 59,000 tonnes of CO₂ per annum offset arising from the proposed Development while a managed retreat approach would offset 1,500 tonnes of CO₂ per annum. [ER 8.6.40]

4.137 In respect of flood relief, the Environment Agency indicated that it was content with a flexible approach to the implementation of the Medway Estuary and Swale Strategy. The Applicant reviewed the Medway Estuary and Swale Strategy and noted two options – the managed realignment at the Cleve Hill site from year 20 or managed realignment in the longer term (with earlier re-alignments taking place at other parts of the Strategy area). The ExA notes that the original Order drafted by the Applicant did not include a fixed timescale for the life of the proposed Development. However, changes were made to the Order during the Examination to limit the lifetime of the proposed Development to 40 years if the Environment Agency was ready to implement managed realignment at that time. The changes have been incorporated into the Order submitted to the Secretary of State by the ExA. The Environment Agency confirmed that the Applicant's proposed decommissioning proposals would leave the Cleve Hill site in a suitable condition for managed retreat to be undertaken. [ER8.6 41 et seq]

4.138 After raising concerns about the possibility of 'rilling' erosion occurring after rainfall dripped from the solar panels, Kent County Council agreed with the Applicant that this would not be a problem. [ER 8.6.44]

4.139 There were concerns raised by Interested Parties that there was the potential for chemicals to leak from either damaged solar panels or damaged battery storage units and contaminate the water environment. The Applicant produced evidence from a number of studies that showed there would be no or little contamination from solar panels. The Applicant also cited information from a company engaged in battery storage projects - Leclanche – which supported the Applicant's conclusion that there would be no significant effects from battery contamination. The Applicant amended its outline Battery Safety Management Plan to make reference to understanding and managing contamination problems. The Battery Storage Management Plan is secured in Requirement 3 of the Order. [ER 8.6.45]

4.140 The ExA asked both the Applicant and the Environment Agency to comment on matters related to the Water Framework Directive. The Applicant noted that it had concluded there would be negligible effects on the water environment and so the proposed Development was in compliance with the Directive. The Environment Agency indicated it had no concerns about the Water Framework Directive providing the construction, operation and decommissioning of the Development were undertaken in a responsible manner.

4.141 The ExA concluded that the proposed Development would be in compliance with the Water Framework Directive (and thus comply with National Policy Statement EN-1) subject to all proposed mitigation measures being secured in the Order. [ER 8.6.47]

4.142 As far as flood risk is concerned, the ExA concludes that the Applicant's Flood Risk Assessment is appropriate and meets the requirements of National Policy Statement EN-1. The ExA also concludes that the Applicant has designed the proposed Development so as to protect the equipment most at risk of flooding. [ER 8.6.48]

4.143 The ExA is content that the risk of flooding in Faversham and Whitstable is not materially increased by the presence of the proposed Development. The ExA comments that, while a concern about such flooding is reasonable, the concerns are based on a misconception about the managed realignment at Cleve Hill. It is supposed to "provide compensatory intertidal habitat to deal with coastal squeeze and the consequential MEASS HRA issues, not reducing flood risk, which would need to be dealt with through other measures". [8.6.49]

4.144 In respect of coastal change and management, the ExA concludes the risks and issues have been adequately addressed. [ER8.6.50]

4.145 With regard to impacts on the water environment, the ExA concludes that the Applicant sets out measures to control pollution in its Environmental Statement. However, there were two outstanding issues carried over into the Examination: the possible contamination from batteries and solar panels; and sediment pollution resulting from water run-off from the solar panels. The ExA concludes that both of these matters have been satisfactorily addressed. The ExA's overall conclusion in this matter is that construction and operational risks have been identified and managed. The ExA is satisfied that there would be no adverse effects on water quality, water resources, water bodies or the wider water environment. The ExA agrees with the Applicant that water quality locally would be likely to improve. [ER 8.6.51 et seq]

4.146 The ExA's key conclusions in respect of water environment is that, taking all policies and mitigations into account, the proposed Development would: be compliant with the Water Framework Directive; be compliant with relevant policies on flood risk; adequately address coastal change and associated risks; adequately address risks through the life-cycle of the project. Finally, while noting some positive impacts, the overall effect on water quality would generally be neutral in the planning balance. [ER 8.6.65]

Secretary of State's Conclusion

4.147 The Secretary of State notes the discussion on this matter and that this matter is, understandably, one that has engaged the intense interest of local people. He notes the ExA's conclusions that the risk of flooding as a result of the Development is not materially different to a scenario without the Development. He further notes that there were specific concerns about the responsibility for the flood defences along the river boundary of the Development being transferred from the Environment Agency to the Applicant but that the Agency itself is content

with this arrangement. The Secretary of State considers that the ExA's conclusions are robust and that this is a matter which does not weigh against the grant of consent for the Development.

Safety and Security

4.148 EN-1 does not make specific reference to battery storage nor are there any relevant Development Plan policies. However, paragraph 3.3.31, EN-1 states... "The Government expects that demand side response, storage and interconnection, will play important roles in a low carbon electricity system.....".

4.149 The Applicant's Environmental Statement concluded that it was unlikely the proposed Development would cause a significant accident, but it acknowledged there were risks, principally in relation to possible fires in the battery storage facility. However, the Environmental Statement set out mitigation measures in the facility that would detect and suppress fires. [ER 8.7.6]

4.150 In relation to security of the proposed Development, the Applicant stated it would be protected by perimeter fencing, CCTV, lighting with sensors and restrictions on who would be able to access the site. [ER 8.7.8]

4.151 The Applicant's Environmental Statement sets out various measures that could be taken to minimise risks of an accident occurring. The Applicant also provided an outline Battery Safety Management Plan which has been reviewed by the Health and Safety Executive and Kent Fire and Rescue Service. The Applicant's Air Quality Impact Assessment considered possible outcomes in the event of a battery fire. The Assessment was criticised by one of the Interested Parties, Dr Erasin, who was concerned about the potential release of poisonous gases in the event of a fire in the battery storage facility. The Applicant responded to say that Dr Erasin's concerns were overstated. [ER 8.7.10 et seq]

4.152 The Secretary of State notes that there were a number of concerns from Interested Parties about the safety of the battery storage facility. These concerns were exacerbated by the new technology that the battery storage facility represented. [ER 8.7.17 et seq]

4.153 The Faversham Society expressed strong concerns about the safety of the batteries that would be utilised in the proposed Development's energy storage facility, stating that: there had been no proper testing of this matter; there was no track record of such large installations in the UK; lithium-ion batteries can catch fire and explode; it was not clear who would be responsible for assessing the safety of the installation; and there was uncertainty about access arrangements for emergency personnel. [ER 8.7.19]

4.154 The Graveney Rural Environment Action Team also raised concerns about the safety of the energy storage facility in respect of the possibility of explosion, fire and the threat of terrorism. [ER 8.7.21]

4.155 The ExA notes that the Local Impact Reports from Swale Borough Council, Canterbury City Council and Kent County Council were all silent on the subject of the safety of battery storage facilities. [ER 8.7.21]

4.156 Later in the Examination, the Faversham Society, raised a number of additional issues in respect of battery storage technologies including that there had been a number of significant battery fires where suppression systems had failed and the cause of the fires was

unknown. In addition, the Society expressed concerns that neither the Application nor the Applicant's draft Order addressed battery storage safety concerns and that there was no established guidance for dealing with battery fires. [ER 8.7.22]

4.157 One of the Interested Parties, Dr Erasin set out concerns about the effects of a fire in lithium-ion batteries with the possible release of toxic fumes – specifically, hydrogen fluoride gas – with potential serious risks for the populations in the vicinity of the proposed Development with Seasalter, Graveney, Faversham and Whitstable being named specifically. Dr Erasin suggested that there should be a 15km safety zone from any population around the battery storage site. [ER 8.7.23] Dr Erasin also raised the possible environmental risk of copper leaching from the solar panels. [ER 8.7.24]

4.158 Dr Erasin made further submissions to the Examination to suggest that it would cost around £40 million to dispose of the batteries as part of any decommissioning of the proposed Development and to express concern about the possible use of Vanadium Redox flow batteries which he considered posed an unacceptable risk given their constituent parts. [ER 8.7.26]

4.159 The Graveney Rural Environment Action Team made representations about the lack of early engagement from the Applicant with the Kent Fire and Rescue Service which had led to the Service not being registered as an Interested Party to the Examination of the Application. The Graveney Rural Environment Action Team also raised the point that some correspondence between the Applicant, Kent Fire and Rescue Service and the Health and Safety Executive had not been disclosed to the Examination. The Graveney Rural Environment Action Team also highlighted that the proposed battery storage facility at the proposed Development would be seven times larger than the current largest similar facility in the world. It also highlighted that battery energy storage fires were more likely to occur in coastal and mountain areas and that they had occurred across a range of battery usage.

4.160 Faversham Town Council raised concerns about the scale of the battery storage element and about fire and toxic risk. [ER 8.7.31]

4.161 The Faversham Society provided another submission towards the close of the Examination which was accepted at the discretion of the ExA setting out the conclusions in a report into two fires at battery storage facilities in Arizona which reinforced the Society's views of the dangers of the proposed storage facility that formed part of the proposed Development. [ER 8.7.32 et seq]

4.162 The Applicant responded setting out its reasons why the Faversham Society's arguments were wrong and that suitable mitigation measures were built-in to the proposals for the battery storage facility at the proposed Development. [ER 8.7.35 et seq]

4.163 In its response, the ExA stated that it had held a special session on battery storage issues in one of the Issue Specific Hearings during the Examination to reflect the level of interest in and concern about the topic. The session heard from Interested Parties who had concerns about the battery storage facility as well as from a company, Leclanche, which appeared at the invitation of the Applicant in an independent capacity. (The ExA considered that Leclanche, while accepting it had no commercial or contractual ties to the proposed Development, could not be counted as truly independent as it provides energy storage systems.) [ER 8.7.40]

4.164 The ExA considered that the Examination hearings provided a lot of additional information about the battery storage facility, though it acknowledged that that might not be sufficient to satisfy the concerns of Interested Parties. [ER 8.7.41]

4.165 Leclanche had installed battery storage systems world-wide but not on the scale as the one that would form part of the proposed Development. However, the company explained that the principles for incorporating safety features into these designs were well-established and applied irrespective of scale. Leclanche said lessons had been learned from battery fires, including those in Arizona, and noted that all of the fires had started at the construction stage of the development cycle. [ER 8.7.43]

4.166 In light of the information about fires during construction, the ExA probed about the safety features that would be installed to prevent such incidents and was reassured about the measures that would be incorporated into the battery storage facility at the proposed Development. The ExA also noted the protective measures that would be in place during the operation of the proposed Development and that inspections could be undertaken by the Health and Safety Executive and Kent Fire and Rescue Service. [ER 8.7.44 et seq]

4.167 The ExA asked about battery leakage and was told that the management systems would be able to detect leaks and initiate automatic shut down. The ExA was content that any leakage would be small and confined within the affected container. [ER 8.7.46]

4.168 The ExA noted that the outline Battery Fire Safety Management Plan set out the minimum information that would need to be included at the detailed design stage for the proposal. The ExA also notes that Requirement 3 of the Order it recommended to the Secretary of State requires the approval of a Battery Safety Management Plan which would set out minimum requirements for safety matters. The ExA was happy that in setting out minimum requirements for information, the relevant local planning authority or Kent Fire and Rescue Service would be able to ask for more information to allow them to fulfil their duties. [ER 8.7.47 et seq]

4.169 In terms of the risk of the escape of gases from the battery storage facility, the ExA concludes on the basis of the information provided by the Applicant that there would be no material threat to health arising from a battery fire at the proposed Development. [ER 8.7.50 et seq]

4.170 The ExA was satisfied that the Applicant's engagement with the Kent Fire and Rescue Service, while late in the application process, has provided "vital understanding which the Applicant has used to inform the outline Battery Safety Management Plan". The ExA allowed the Kent Fire and Rescue Service to take part in hearings during the Examination as a non-Interested Party. In respect of the claim made by the Graveney Rural Environment Action Team that not all of the Applicant's correspondence with Kent Fire and Rescue Service and the Health and Safety Executive had been provided to the Examination, the ExA stated it had an understanding of their respective positions. The ExA noted the concern by the Graveney Rural Environment Action Team that any battery fire might just be allowed to burn itself out but was satisfied with Kent Fire and Rescue Services' position that it would determine how to respond to any situation on the ground by way of a number of possible options. The ExA also considered the concern from the Graveney Rural Environment Action Team about the adequacy of the information available to the Kent Fire and Rescue Service and noted that the Service had written

to indicate it would deal with situations based on experiences elsewhere and by working with the site operator. [8.7.52 et seq]

4.171 In addition, in the event that the Order was made, then the local planning authority and relevant consultees would need to be given details of the proposed installation. The ExA was satisfied, therefore, that this process would make available all the information that the Kent Fire and Rescue would need to be able to fight a fire in the battery storage facility. [ER 8.7.57]

4.172 The ExA notes concerns about the battery storage technology that might be employed at the proposed Development but decided that it would not be appropriate to limit the choice of systems that the Applicant might want to deploy and so had not included any provision to limit flexibility in the Order that it recommended to the Secretary of State. The ExA considered that the relevant processes, legislation and safety requirements would apply to all battery technologies. Similarly, the Applicant would need to satisfy a range of consultees before a Battery Safety Management Plan could be agreed. [ER 8.7.58 et seq]

4.173 As far as security of the site of the proposed Development is concerned, the ExA considered the concerns raised by Interested Parties but was satisfied that measures proposed to protect the site were reasonable. Notwithstanding that point, the ExA acknowledged that fear of criminal activity is capable of being a material consideration in the determination of the Application. However, it went on to conclude that no party had provided any evidence that measures additional to those proposed by the Applicant were necessary. [ER 8.7.60 et seq]

4.174 The ExA noted guidance in National Policy statement EN-1 about security considerations but concluded that there was no indication that the proposed Development would be considered to be critical infrastructure with security implications. [ER 8.7.62]

4.175 The ExA's overall conclusions on safety and security were that there were a large number of representations about this issue which flowed from the scale of the proposed battery storage facility, the fact that it was a new technology, the risk of major fires and the proximity of the battery storage facility to local populations. The ExA acknowledged those concerns. However, it took comfort from the legislation and guidance and the Battery Safety Management Plan which would be subject to consultation with relevant bodies and the ExA was, therefore, confident that the risks could be managed or mitigated appropriately. As far as site safety was concerned, the ExA noted that the measures proposed by the Applicant might be viewed as minimal but there was no evidence before it that anything else was needed – there was a sound basis for managing and mitigating site safety risks. The ExA's overall conclusion on this matter, therefore, was that there was nothing of weight to carry into the overall planning balance.

Secretary of State's Conclusion

4.176 The Secretary of State notes that the safety and security of the Development generated many concerns from Interested Parties to the Examination who were worried about the potential health risks of a fire or explosion within the battery storage facility that formed part of the proposed Development. In addition, the Secretary of State notes that the ExA's analysis of this matter was informed by a range of views and considerations, including from the Kent Fire and Rescue Service. He considers, therefore, that its consideration is robust and wide-ranging. While noting the strength of feeling among local people about this matter (since the receipt of the ExA's Report, a considerable number of representations have been received about the impacts of the Development, with many citing the safety of the battery storage unit as a key

issue), the Secretary of State does not see any reason to disagree with the conclusions reached by the ExA.

Other Matters

Appointment of the Examining Authority

4.177 There were a number of complaints about the appointment of David Rose as Lead Member of the Examining Panel. The complaints arose because Mr Rose had been the Examining Inspector in an application for consent for the London Array Electricity Substation which sits on a site within the boundary of the proposed Development. Mr Rose recommended that consent should be granted for the substation and the Secretaries of State for Trade and Industry and Communities and Local Government agreed with the recommendation.

Secretary of State's Conclusions

4.178 The matter raised by the complainants is not one for the Secretary of State – the appointment of examiners to conduct Examinations into applications for development consent under the Planning Act 2008 is a matter for the Planning Inspectorate to determine.

Parameters of the Cleve Hill Solar Park

4.179 The ExA drew the Secretary of State's attention to its view that, while the proposed Development was well defined by reference to the descriptions in the Environmental Statement and in other documentation submitted with the Application, there was a possibility that the 'as built' project could expand beyond those definitions. The ExA, therefore, recommended that additional wording – which it provided – should be added to the Order to prevent any potential for project expansion beyond what had been assessed in the Examination. The ExA did not ask for comments on its proposed wording before the close of the Examination but suggested that the Secretary of state should do so.

Secretary of State's Conclusion

4.180 The Secretary of State considered the ExA's comments on this matter and decided that the views of the Applicant (and others) should be sought on the proposed wording. A consultation letter was issued on 6 April 2020 covering this and other matters with a form of words for inclusion in any Order that the Secretary of State might issue. The Applicant replied indicating it was content with the inclusion of the proposed wording. Other respondents indicated that they felt the parameters of the proposed Development were too widely drawn. However, they made no comment on the specific wording proposed. Having considered the consultation responses, the Secretary of State considers it is necessary and adequate to prevent any potential for project expansion beyond what has been assessed in the examination and has, therefore, incorporated the proposed wording into the Order that he has decided to make.

The Ability of Swale Borough Council to Monitor and Enforce conditions in any Order that Might be Granted

4.181 A number of Interested Parties during the Examination and several parties in the wake of the Secretary of State's receipt of the ExA's Report (including in responses to the

Secretary of State's consultation) expressed concerns about Swale Borough Council's ability to monitor and enforce conditions in any Order that might be granted by the Secretary of State.

Secretary of State's Conclusion

4.182 The Secretary of State notes that Swale Borough Council expressed its views about the way the draft Order provided by the Applicant did not provide a straightforward way to set out conditions. However, the Council did not express views about its ability to physically monitor and enforce conditions. The ExA did not express any views on Swale Borough Council's ability to perform its functions in relation to this matter. The Secretary of State does not consider that the concerns expressed by Interested Parties and others have any adverse impact on his decision.

Late Representation from Sir David Melville for the Faversham Society

4.183 Sir David Melville, from the Faversham Society, wrote to BEIS officials on 29 and 30 April 2020 to raise concerns about a legal action between Wirsol (one of the partners in the Cleve Hill Solar Park Limited joint venture) and an energy company [Toucan] that had bought some of Wirsol's solar power plants. An article provided by Sir David reported that Toucan was suing Wirsol about faults in the construction of a number of solar farms with Toucan countersuing Wirsol. Sir David wanted the Secretary of State to be aware of the matter.

4.184 Professor Harold Goodwin, the Chair of The Faversham Society, also wrote to the Secretary of State on 19 May 2020 to reiterate concerns about the Development and draw the Secretary of State's attention to an online petition opposing the project which had been signed by more than 4,000 people.

Secretary of State's Consideration

4.185 The legal action between Toucan and Wirsol (which was, according to the Applicant initiated by Wirsol with a counterclaim by Toucan) was considered by the ExA during the Examination, including particular allegations concerning a breach of contractual obligations between the parties. That litigation has not reached its conclusion and the ExA has fully considered the safety elements of the proposal. Any safety issues arising during the lifetime of the proposed Development would be for the Health and Safety Executive to consider.

4.186 The Secretary of State considers that neither the letter of 19 May 2020 nor the online petition raise any new issues that had not been covered in the Examination.

5. Impacts on Natura 2000 Sites and Their Features

5.1 The Conservation of Habitats and Species Regulations 2017 ("the Habitats Regulations") require the Secretary of State to consider whether the project is likely, either alone or in combination with other plans and projects, to have a significant effect on a Natura 2000 Site, as defined in the Habitats Regulations. If likely significant effects cannot be ruled out, then an Appropriate Assessment of the implications of the project for that site in view of its conservation objectives must be undertaken by the Secretary of State pursuant to regulation 63(1) of the Habitats Regulations. In light of that, the Secretary of State must determine whether the project will have an adverse effect on the integrity of the site. Consent may only be granted if the project will not adversely affect the integrity of a European site.

5.2 In the case of the proposed Development, the Secretary of State notes that the Applicant and other parties including Natural England and non-Governmental Organisations provided information to assist in the consideration of habitats impacts. The ExA produced a Report on the Implications for European Sites (“RIES”) to compile, document and signpost information provided in the Application, and on information submitted throughout the Examination by both the Applicant and Interested Parties in relation to potential effects on Natura 2000 sites and states that this was published and comments were invited on it. The ExA took account of representations on this matter in its Report.

5.3 The boundary of the proposed Development overlaps to some extent with the boundaries of two Natura 2000 sites – the Swale Special Protection Area and the Swale Ramsar site.

5.4 The ExA records that the Applicant carried out a study of Natura 2000 sites that could potentially be affected by the proposed Development. The Applicant concluded that there would be no likely significant effect on most of those sites: the Outer Thames Estuary Special Protection Area, the Blean Complex Special Area of Conservation, or the Thanet Coast and Sandwich Bay Special Protection Area and Ramsar Site. These conclusions were agreed with Natural England and Kent Wildlife Trust. The ExA notes that no Interested Parties disputed this conclusion. [ER 9.6.4]

5.5 The Applicant did, however, conclude that there was the potential for likely significant effects on the Swale Special Protection Area and Swale Ramsar site. The Applicant set out a range of factors arising from the proposed Development that had the potential to lead to a likely significant effect on these sites: loss or change of habitats; noise and visual disturbance; hydrological changes; and deposition of dust. [ER 9.6.6]

5.6 The ExA considered all these matters with particular attention being focused on the potential for displacement of four species of bird that formed part of the interest feature of the Swale Special Protection Area and Swale Ramsar site: Brent goose, lapwing, golden plover and marsh harrier due to loss or change of habitats. Detailed discussion about the potential impacts on these species is set out in paragraphs 4.19 to 4.42 above (in the ‘biodiversity and nature conservation’ section).

5.7 The Secretary of State notes that the ExA’s overall conclusion was that the proposed Development would not lead to an adverse effect on the integrity of the Swale Special Protection Area or Ramsar site due to noise and visual disturbance, loss or change of habitats, hydrological changes or deposition of dust. The ExA considered that there was sufficient information available to the Secretary of State to be able to, if deemed necessary, undertake an appropriate assessment of the effects of the proposed Development on Natural 2000 sites.

5.8 The Secretary of State’s Habitats Regulations Assessment that accompanies this decision letter concludes that a likely significant effect could not be ruled out in respect of the Swale Special Protection Area and Ramsar site due to the effects of noise and visual disturbance, loss or change of habitats, hydrological changes or deposition of dust. The Secretary of State, therefore, then needed to consider whether the proposed Development would have an adverse effect on the integrity of those sites, either alone or in-combination, with other plans or projects. An Appropriate Assessment was, therefore, undertaken to assess the implications of the proposed Development in relation to the conservation objectives of those sites to ascertain whether it would adversely affect the integrity of the Natura 2000 sites. The

overall conclusion of the Assessment was that there would be no adverse effects on the integrity of either the Swale Special Protection Area or the Swale Ramsar site either alone or in combination with other plans or projects subject to the mitigation secured in the DCO.

6. Compulsory Acquisition & Temporary Possession

6.1 The Applicant is seeking powers for the Compulsory Acquisition of freehold interests and private rights and for the acquisition of temporary possession of land.

6.2 The Planning Act 2008, together with related case-law and guidance, sets out that compulsory acquisition can only be granted if certain conditions are met.

6.3 The ExA notes that the Applicant had provided relevant documentation to support its case – a Book of Reference, a Land Plan, a Statement of Reasons and a Funding Statement – and that the documents were amended as necessary as the Examination proceeded. [ER 11.3.2 et seq]

6.4 The ExA also noted that the Applicant reported that it had reached agreement with 91% of all parties in respect of obtaining agreement for access to land. [11.3.5]

6.5 The ExA sets out the reasons given by the Applicant for wanting the powers requested: to secure land, new rights over land, the imposition of restrictions and the temporary use of land required to enable CHSPL to construct, operate and maintain the Project within a reasonable commercial timeframe. The inclusion of powers of compulsory acquisition in the Order is sought in order to ensure that this can be achieved [taken from the Applicant's Statement of Reasons of November 2018 Revision A].

6.6. The ExA notes that there were two objections to the grant of Compulsory Acquisition and Temporary Possession powers – from London Array Limited (submitted by Charles Russell Speechlys LLP) and from National Grid Electricity Transmission. Other representations were received from Interested Parties which expressed formal interests in this issue but did not object to the grant of Compulsory Acquisition and Temporary Possession powers being requested. [ER 11.5.2 et seq]

6.7 The ExA considered the Applicant's case for securing the powers requested by looking at the Application through the prism of the key tests set out in the Compulsory Acquisition guidance issued by the Department for Communities and Local Government (now the Ministry of Housing, Communities and Local Government). The Applicant considered that the approach it had adopted and the information it had provided met the key issues set out in the guidance: whether reasonable alternatives had been considered; whether the Applicant had a clear idea about how it would use the land; whether the proposed action was legitimate, proportionate and necessary; whether there was a compelling case in the public interest [to grant the powers requested]; and, whether the Applicant had appropriate funding available for the payment of compensation. [ER 11.5.17 et seq]

6.8 As far as the availability of funds was concerned, the ExA notes that the Graveney Rural Environment Action Team informed it before the close of the Examination that Wirsol (one of the partners in the Cleve Hill Solar Park Limited joint venture) had not filed its financial accounts which were due by 30 September 2019 and its ability to fund the proposed Development was, therefore, compromised. The Applicant responded that while the filing of the accounts had been delayed, that issue would have no bearing on the proposed

Development. The ExA considered the position and was content with the Applicant's funding arrangements for the proposed Development. The ExA also noted that Article 39 in the Order submitted to the Secretary of State provided protection for landowners in respect of compensation. [ER 11.5.23 et seq]

6.9 During the Examination, the ExA questioned the Applicant about the request for Compulsory Acquisition and Temporary Possession powers sought in respect of the flood defences and the proposed Habitat Management Areas (Works 9 and 8 respectively). Looking at the flood defences, the ExA was happy that these were correctly categorised as Associated Development as their purpose was to protect the proposed Development. That being the case, the ExA concluded that the test for granting Compulsory Acquisition powers over them had been met. [ER 11.5.28 et seq]

6.10 In respect of the Arable Reversion Habitat Management Area and the Freshwater Grazing Marsh Habitat Management Area, the ExA was also content that these constituted Associated Development, and the Compulsory Acquisition powers sought were therefore justified in this case as well. [ER 11.5.32]

6.11 The ExA's consideration of the Lowland Grassland Meadow Habitat Management Area noted that this area forms a major portion of Plot No. 5/03 with the remainder occupied by solar arrays and bordered by proposed native species hedging (forming Works 1 and 4). The ExA notes that the Applicant says the main aim of the Lowland Grassland Meadow Habitat Management Area is to establish a grassland sward and scrub with greater ecological value than the existing land. No physical works were proposed within this Lowland Grassland Meadow Habitat Management Area. [ER 11.5.34]

6.12 In considering this matter, the ExA took the view that the primary mitigation of impacts had already been achieved by deleting solar panels from the part of the site that would be used for the Lowland Grassland Meadow Habitat Management Area. The ExA was not, therefore, convinced that the case had been made for the inclusion of Plot No. 5/03 in the provision granting Compulsory Acquisition powers except in respect of Works 1 and 4 (though powers of Temporary Possession would still be in place for all other relevant Works).

6.13 However, the ExA noted in its Report that it had not sought views on whether all except Works 1 and 4 should be removed from the scope of Compulsory Acquisition powers over Plot No. 5/03. BEIS, officials, therefore, on behalf of the Secretary of State, wrote out to the Applicant and other Interested Parties on 6 April 2020 to seek their views on the possible exclusion of Plot No. 5/03 from the list of plots subject to Compulsory Acquisition powers.

6.14 The Applicant responded to set out that it was strongly of the view that the Compulsory Acquisition powers over Plot No. 5/03 for Works other than 1 and 4 should be retained as the Lower Grassland Meadow Habitat Management Area was an integral part of the Authorised Development and the Landscape and Biodiversity Management Plan. The Lowland Grassland Meadow Habitat Management Area was a key consideration in the overall planning balance. The Applicant repeated the arguments that were put to the ExA during the Examination and stated the outline Landscape and Biodiversity Management Plan contributed to overall biodiversity net gain. The Applicant went on to state that if the Lowland Grassland Habitat Management Area was not delivered, then the predicted biodiversity net gain would be reduced. In addition, Requirement 5 of the Order requires the Applicant to deliver the Lowland Grassland Habitat Management Area (as part of the Landscape and Biodiversity Management Plan). Finally, the Applicant argues that the inclusion of Compulsory Acquisition powers over

Plot No. 5/03 in respect of relevant works accords with the tests for granting such powers set out in the Planning Act 2008: it would not be appropriate, therefore, to limit those powers in the current case.

6.15 The RSPB's response set out that the Lowland Grassland Meadow Habitat Management Plan was needed to avoid impacts on wildlife.

6.16 Natural England's position was that the Lowland Grassland Meadow Habitat Management Plan was not needed to provide mitigation to avoid an adverse effect on the integrity of the Swale SPA. However, Natural England went on to say that the Area was important for biodiversity net gain and for the proposed Development as a whole.

6.17 Consultation responses were also received from the Faversham Society, Faversham Town Council and CPRE but none of these representations touched on the particular issues related to Compulsory Acquisition.

6.18 As far as the objections from London Array Limited and National Grid Electricity Transmission (with regard to their particular interests), the ExA notes that these were withdrawn. [ER 11.5.49 et seq]

6.19 The ExA considered the effects on statutory undertakers and others with protective provisions in the Order and concluded they were acceptable. The ExA further considered that Crown Land had suitable protection subject to the inclusion of provisions acceptable to the Crown Estate in the Order. Finally, the ExA was content that Section 132(3) of the Planning Act 2008 in respect of open space land had been satisfied. [ER 5.11.58 et seq]

6.20 The ExA considered that the provisions of the Human Rights Act 2008 had been met. There would be significant benefit from the grant of the Order which would only be realised if the requested Compulsory Acquisition and Temporary Powers were granted (except for those relating to the Lowland Grassland Meadow Habitat Management Area in Plot No. 5/03 in respect of Works other than 1 and 4). The ExA also notes that there were no outstanding objections to the grant of Compulsory Acquisition and Temporary Possession powers at the end of the Examination. [ER 11.5.63]

6.21 In its conclusion, the ExA considered that all legislative and policy requirements had been met (subject to the qualification in relation to the Lowland Grassland Meadow Habitat Management Plan in Plot No. 5/03). The ExA's specific conclusions were that: there was a compelling case for the powers requested; the proposed Development was in accord with National Policy Statements EN-1 and EN-5; the land in question was needed to secure the proposed Development (except for Plot No. 5/03); there would be a public benefit from the proposed Development; any private loss would be mitigated or minimised; the Applicant had explored reasonable alternatives; there were no alternatives which ought to be preferred; and secure funding for the proposed Development was available. [ER 11.6.7]

6.22 However, the ExA notes that the argument for agreeing Compulsory Acquisition and Temporary Possession powers must be based on the case for the development overall. The ExA concludes that consent should be granted for the proposed Development (except for Plot No. 5/03) and that Compulsory Acquisition and Temporary Possession are justified because there is a compelling case in favour of doing so. [ER 11.6.8]

6.23 As indicated above, the ExA considers that Temporary Possession powers are necessary and should be granted. The ExA considers that it is "...not appropriate to apply Temporary Possession powers prospectively emerging from the Neighbourhood Planning Act 2017 in this case, as by the close of the Examination those powers had not yet commenced." [ER 11.6.9]

6.24 Affected Persons were consulted about the proposed Development and the project design was developed on the basis of the situation prior to the passage of the Neighbourhood Planning Act 2017. The ExA notes that the Applicant proposes to exclude the operation of Temporary Possession provisions of the Act in article 6 of the Order. The ExA considers this to be an appropriate response. [ER 11.6.10]

Human Rights

6.25 As far as human rights in relation to the proposals for compulsory acquisition and temporary possession of land and rights over land are concerned, the ExA is satisfied that: the Examination ensured a fair and public hearing; any interference with human rights arising from implementation of the proposed Development is proportionate and strikes a fair balance between the rights of the individual and the public interest; and that compensation would be available in respect of any quantifiable loss. The Secretary of State sees no reason to disagree with the ExA's conclusion that there is no disproportionate or unjustified interference with human rights so as to conflict with the provisions of the Human Rights Act 1998, even with the inclusion of Plot No. 5/03.

Overall Conclusion on Compulsory Acquisition

6.26 The Secretary of State is satisfied that there are no outstanding issues or reasons to refuse the Compulsory Acquisition and Temporary Possession powers as recommended by the ExA. However, in respect of the ExA's consideration of the request for Compulsory Acquisition powers in relation to Works other than 1 and 4 over Plot No. 5/03, the Secretary of State considers that in accordance with s122 of the 2008 Act, the land is required and that there is a compelling case for inclusion particularly in view of the additional benefits in respect of biodiversity net gain that the Development would be able to deliver if the Lowland Grass Meadow Habitat Management Area can be implemented in full.

7. The Secretary of State's Consideration of the Planning Balance

7.1 The Secretary of State notes that decision-making in Planning Act 2008 cases is a balancing exercise and the weight afforded to different elements of the matrix of impacts and benefits will affect the overall conclusion. As indicated above, he further notes the absence of a type-specific National Policy Statement for solar power or for battery storage (although the general presumption in favour of all types of energy generation in National Policy Statement EN-1 is a relevant and important matter, even if the presumption of need and that the relative weight to be given to specified criteria in EN-1 does not directly apply in this case). In the absence of a type specific National Policy Statement, the Secretary of State is required to determine applications for development consent for nationally significant infrastructure projects against section 105 of the Planning Act 2008. Section 105(2) requires the Secretary of State to have regard to:

- (a) any local impact report (within the meaning given by section 60(3)) submitted to the Secretary of State before the deadline specified in a notice under section 60(2),

(b) any matters prescribed in relation to development of the description to which the application relates, and

(c) any other matters which the Secretary of State thinks are both important and relevant to the Secretary of State's decision.

7.2 The Secretary of State considers that there is a strong case in favour of granting development consent for the proposed Development. National Policy Statement EN-1 which gives support to renewable electricity generating nationally significant infrastructure projects is relevant and important to the consideration of the Application. This support must however be considered in the planning balance.

7.3 In addition, the Secretary of State acknowledges and adopts the substantial weight the ExA gives to the contribution to meeting the need for renewable energy infrastructure given by the proposed solar farm element of the proposed Development on its own account and the further weight in favour of the proposed development's battery storage facility. He further notes the ExA has identified that the Development would, in addition to meeting demand for electricity, also do in a way which be consistent with the Climate Change Act 2008 (2050 Target Amendment) Order 2019 which amended the Climate Change Act 2008 to set a legally binding target of a 100% reduction in greenhouse gas emissions (compared to 1990 levels) in the United Kingdom.

7.4 However, there are a number of adverse effects also identified by the ExA in respect of landscape, visual, recreational, and cultural heritage impacts, and limited weight attributed by the ExA to temporary transport and traffic impacts. In addition, local residents and some local organisations have raised various concerns, including about the proposed battery storage facilities citing the risk of fire, explosion and the release of poisonous gases and the impacts on amenity, wildlife and general well-being.

7.5 The Secretary of State has considered all the merits and disbenefits of the proposed Development and concluded that, on balance, the benefits of the Development outweigh its negative impacts.

8. General Considerations

Equality Act 2010

8.1 The Equality Act 2010 includes a public sector "general equality duty" ("PSED"). This requires public authorities to have due regard in the exercise of their functions to the need to eliminate unlawful discrimination, harassment and victimisation and any other conduct prohibited under the Act; advance equality of opportunity between people who share a protected characteristic and those who do not; and foster good relations between people who share a protected characteristic and those who do not in respect of the following "protected characteristics": age; gender; gender reassignment; disability; marriage and civil partnerships²; pregnancy and maternity; religion and belief; and race.

² In respect of the first statutory objective (eliminating unlawful discrimination etc.) only.

8.2 In considering this matter, the Secretary of State (as decision-maker) must pay due regard to the aims of the PSED. This must include consideration of all potential equality impacts highlighted during the Examination.

8.3 The Secretary of State notes that the Applicant did not include within the Equalities Impact Assessment (“EqIA”) document it submitted to the Examination an assessment of the impact of the proposed Development on specific children with protected characteristics potentially affected by noise and other effects from the construction and operation of the proposed Development. However, it did consider impacts on relevant receptor groups and noted there are a range of disabilities which could result in an individual with a protected characteristic experiencing different effects from the proposed Development than those who do not share that characteristic. Nor did the EqIA mention any potential for any disproportionate adverse impacts on elderly people – a point raised by Graveney and Goodnestone Parish Council in a submission to the Examination. (The Applicant did cover the potential equality impacts on young people at the Graveney Primary School.)

8.4 The Secretary of State has considered the potential equality impacts on the family and concluded that there was no evidence to show that the mitigation measures that had been proposed by the Applicant would not be effective. While noting that it is possible that any impact on members of the family could be of such magnitude as to breach their human rights, the Secretary of State believes that the ExA’s consideration of this issue is a reasonable one and does not see any reason to disagree with it.

8.5 Again, the Secretary of State notes that the ExA did not consider potential equality impacts on old people specifically. However, the Secretary of State has considered this matter and has not identified any effects of the proposed Development that would affect elderly people differently compared with other members of the population in its vicinity. Having had regard to the aims of the PSED, the Secretary of State does not, consider that there would be any breach of the PSED in respect of this particular population.

Natural Environment and Rural Communities Act 2006

8.6 The Secretary of State, in accordance with the duty in section 40(1) of the Natural Environment and Rural Communities Act 2006, has to have regard to the purpose of conserving biodiversity, and in particular to the United Nations Environmental Programme Convention on Biological Diversity of 1992, when granting development consent.

8.7 The Secretary of State is of the view that the ExA’s report, together with the environmental impact analysis, considers biodiversity sufficiently to inform him in this respect. In reaching the decision to give consent to the Development, the Secretary of State has had due regard to conserving biodiversity.

9. Other Matters

9.1 The Secretary of State notes that there are various other consents, licences and permits that are likely to be required to construct and operate the Development [ER 1.6.1], and has no reason to believe that the relevant approvals would also not be forthcoming.

10. Representations Received After the Close of the Examination

10.1 The Secretary of State received a considerable amount of correspondence after the close of the examination raising concerns about the potential impacts of the Development. The Secretary of State has considered the matters raised in the correspondence but does not believe that they raise any new issues that were not considered by the Examining Authority in its Report.

11. Secretary of State's Conclusions and Decision

11.1 For the reasons given in this letter, the Secretary of State considers that there is a strong case for granting development consent for the Cleve Hill Solar Park. Given the national need for renewable energy infrastructure and the substantial weight the Secretary of State attaches to the contribution of this development to meeting that need the Secretary of State does not believe that this is outweighed by the Development's potential adverse impacts, as mitigated by the proposed terms of the Order.

11.2 The Secretary of State has therefore decided to accept the ExA's recommendation to make the Order granting development consent [ER 13.3.1] to include modifications set out below in section 12 below. In reaching this decision, the Secretary of State confirms regard has been given to the ExA's Report, the LIRs submitted by SBC, CCC, KCC and to all other matters which are considered important and relevant to the Secretary of State's decision as required by section 105 of the Planning Act 2008. The Secretary of State confirms for the purposes of regulation 4(2) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 that the environmental information as defined in regulation 3(1) of those Regulations has been taken into consideration.

12. Modifications to the Order by the Secretary of State

12.1 The Secretary of State has made the following modifications to the Order:

- Amendment to Article 4(1) to confirm that the undertaker is granted development consent for the authorised development within the Order limits;
- Addition at Article 5(1) to confirm the provisions of the Order have effect solely for the benefit of the undertaker except as otherwise provided by the Order;
- Removal of provisions in Article 5 setting time limits on the Secretary of State to consent to requests to transfer the benefit of the Order. There is no suggestion that the Secretary of State has previously failed to respond to such requests within good time. Further, the consent of the Secretary of State is not required in straightforward transfers in the circumstances specified in subparagraph 7 of the Article;
- Removal of provisions within Articles 5 and 35 for the referral of the Secretary of State's decision-making for determination. The Secretary of State agrees with the ExA's consideration of these provisions;
- Amendment to Article 14(4) to confirm that the undertaker is authorised to enter land to carry out protective works within the Order limits;
- Amendment at Article 24(4) to remove the term "temporary". It appears that only those works specified in subparagraphs 24(4)(a)-(d) are intended to remain after the undertaker gives up temporary possession of the land and the amendment reflects that position;
- Removal of Article 34(3), which provided that references in certified documents to provisions of the draft DCO that are numbered differently in the final Order must be

construed as referring to the corresponding provision in the Order as made. This has been removed to ensure legal clarity when referring to certified documents;

- Addition at Schedule 1, Part 2, of subparagraph 2(2)(c) to provide that details of the authorised Development must accord with the principles and assessments set out in the environmental statement. The Secretary of State has consulted on this issue and considers this addition necessary to prevent potential expansion of the project beyond approved parameters;
- Amendment at Schedule 1, Part 2, paragraph 18 to remove reference to the Secretary of State. There appear to be no requirements under which approval from the Secretary of State is required;
- Amendment of Schedule 7, Part 4, paragraph 11 to remove reference to determination of drainage disputes by the Secretary of States for BEIS and DEFRA. Such matters are to be determined by an arbitrator.

12.2 The Explanatory Note to the Order has been amended to enable public inspection of the Order online while restrictions on movement remain in place in response to the coronavirus pandemic.

12.3 In addition to the above, the Secretary of State has made various changes to the draft Order which do not materially alter its effect, including changes to conform with the current practice for statutory instruments (for example, modernisation of language), changes made in the interests of clarity and consistency, and changes to ensure that the Order has its intended effect.

13. Challenge to decision

13.1 The circumstances in which the Secretary of State's decision may be challenged are set out in the Annex to this letter.

14. Publicity for decision

14.1 The Secretary of State's decision on this Application is being publicised as required by section 116 of the Planning Act 2008 and regulation 31 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

14.2 Section 134(6A) of the Planning Act 2008 provides that a compulsory acquisition notice shall be a local land charge. Section 134(6A) also requires the compulsory acquisition notice to be sent to the Chief Land Registrar, and this will be the case where the order is situated in an area for which the Chief Land Registrar has given notice that they now keep the local land charges register following changes made by Schedule 5 to the Infrastructure Act 2015. However, where land in the order is situated in an area for which the local authority remains the registering authority for local land charges (because the changes made by the Infrastructure Act 2015 have not yet taken effect), the prospective purchaser should comply with the steps required by section 5 of the Local Land Charges Act 1975 (prior to it being amended by the Infrastructure Act 2015) to ensure that the charge is registered by the local authority.

Yours sincerely

Gareth Leigh
Gareth Leigh

LEGAL CHALLENGES RELATING TO APPLICATIONS FOR DEVELOPMENT CONSENT ORDERS

Under section 118 of the Planning Act 2008, an Order granting development consent, or anything done, or omitted to be done, by the Secretary of State in relation to an application for such an Order, can be challenged only by means of a claim for judicial review. A claim for judicial review must be made to the Planning Court during the period of 6 weeks beginning with the day after the day on which the Order is published. The decision documents are being published on the date of this letter on the Planning Inspectorate website at the following address:

<https://infrastructure.planninginspectorate.gov.uk/projects/south-east/cleve-hill-solar-park/>

These notes are provided for guidance only. A person who thinks they may have grounds for challenging the decision to make the Order referred to in this letter is advised to seek legal advice before taking any action. If you require advice on the process for making any challenge you should contact the Administrative Court Office at the Royal Courts of Justice, Strand, London, WC2A 2LL (0207 947 6655)

APPENDIX 7: BIODIVERSITY CALCULATION TOOL

The Biodiversity Metric 2.0 - Calculation Tool

Main menu

| Street tree helper | | |
|--------------------|-------------|---------------|
| Tree size | Tree number | Area |
| Small | | 0.0000 |
| Medium | | 0.0000 |
| Large | | 0.0000 |
| Total | 0.00 | 0.0000 |

- Start page
- Instructions
- Technical data
- Results

Start here



On-site baseline

- A-1 On-site habitat
- B-1 On-site hedge
- C-1 On-Site river baseline

On-site post development

- A-2 Habitat creation
- A-3 Habitat enhancement
- A-4 Habitat accelerated succession
- B-2 Hedgerow creation
- B-3 Hedgerow enhancement
- C-2 River creation
- C-3 River enhancement

Off-site baseline

- D-1 Off-site habitat
- E-1 Off-site hedge baseline
- F-1 Off-site river baseline

Off-Site post development

- D-2 Habitat creation
- D-3 Habitat enhancement
- D-4 Habitat accelerated succession
- E-2 Hedgerow creation
- E-3 Hedgerow enhancement
- F-2 River creation
- F-3 River enhancement

Little Crow Solar

Headline Results

[Return to results menu](#)

| | | |
|---|-----------------------|---------|
| On-site baseline | <i>Habitat units</i> | 679.25 |
| | <i>Hedgerow units</i> | 32.20 |
| | <i>River units</i> | 21.24 |
| On-site post-intervention (Including habitat retention, creation, enhancement & succession) | <i>Habitat units</i> | 1327.88 |
| | <i>Hedgerow units</i> | 46.62 |
| | <i>River units</i> | 21.24 |
| Off-site baseline | <i>Habitat units</i> | 0.00 |
| | <i>Hedgerow units</i> | 0.00 |
| | <i>River units</i> | 0.00 |
| Off-site post-intervention (Including habitat retention, creation, enhancement & succession) | <i>Habitat units</i> | 0.00 |
| | <i>Hedgerow units</i> | 0.00 |
| | <i>River units</i> | 0.00 |
| Total net unit change (including all on-site & off-site habitat retention/creation) | <i>Habitat units</i> | 648.63 |
| | <i>Hedgerow units</i> | 14.42 |
| | <i>River units</i> | 0.00 |

Total net % change

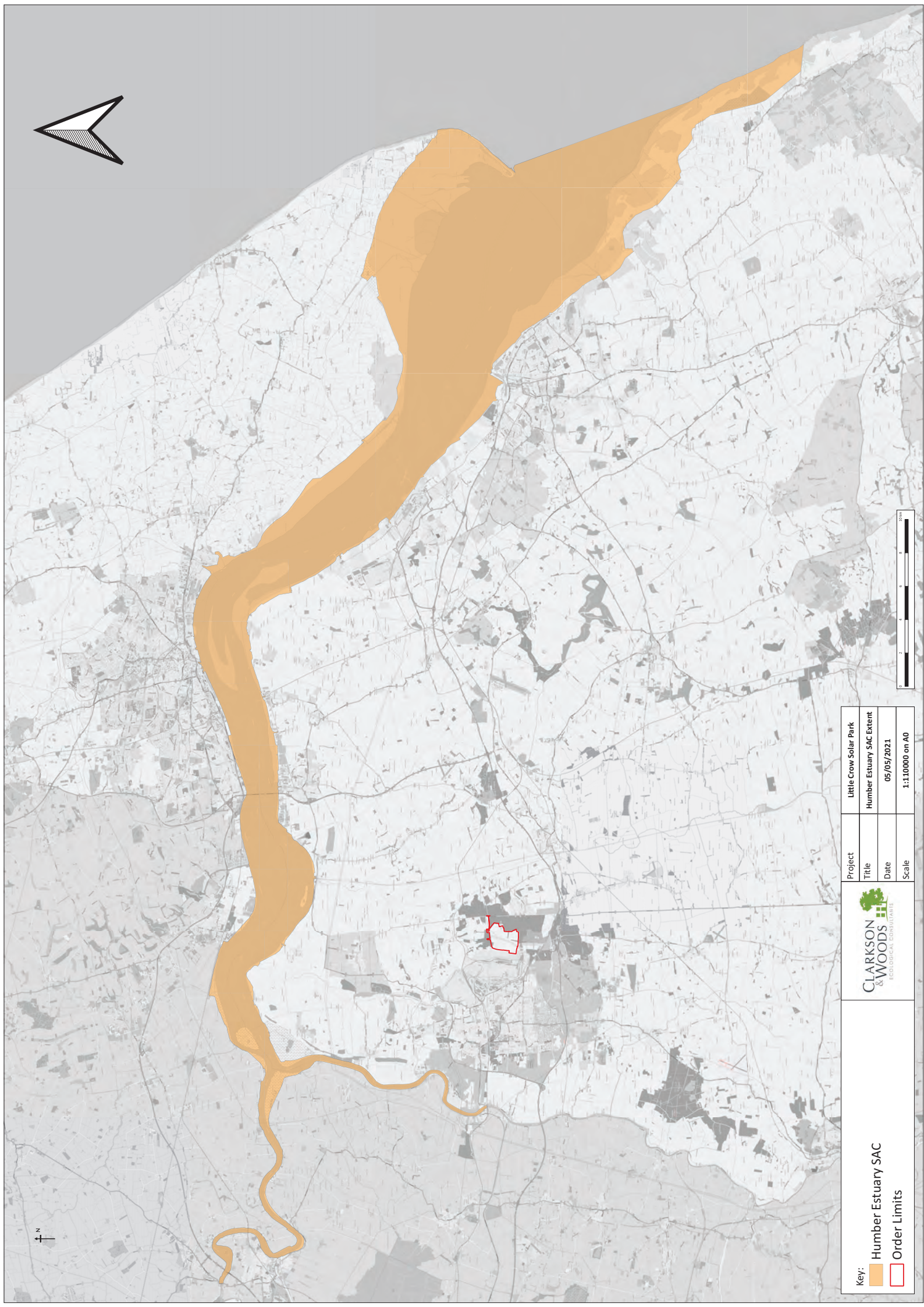
(including all on-site & off-site habitat creation + retained habitats)

| | |
|-----------------------|---------------|
| <i>Habitat units</i> | 95.49% |
| <i>Hedgerow units</i> | 44.79% |
| <i>River units</i> | 0.00% |

| | | | | | | |
|---------------------|-----|-----|-----|-----|-----|-----|
| Intertidal sediment | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Coastal saltmarsh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rocky shore | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Coastal lagoons | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Habitat group | Baseline | | Combined Post development | | | Combined change |
|-------------------------|---------------|----------------|---------------------------|----------------|---------------|-----------------|
| | Existing area | Existing value | Proposed area | Proposed value | Proposed area | Proposed value |
| Cropland | 186.6 | 362.9 | 7.6 | 30.1 | -179.0 | -332.9 |
| Grassland | 18.3 | 0.0 | 178.1 | 1155.0 | 159.8 | 1155.0 |
| Heathland and shrub | 2.5 | 0.0 | 0.0 | 19.6 | -2.5 | 19.6 |
| Rivers and lakes | 0.5 | 0.0 | 0.0 | 5.8 | -0.5 | 5.8 |
| Sparsely vegetated land | 2.3 | 6.8 | -2.3 | -6.8 | -4.5 | -13.6 |
| Urban | 0.0 | 0.0 | 3.1 | 0.0 | 3.1 | 0.0 |
| Wetland | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Woodland and forest | 11.1 | 0.0 | 0.0 | 117.4 | -11.1 | 117.4 |
| Intertidal sediment | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Coastal saltmarsh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rocky shore | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Coastal lagoons | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

APPENDIX 8: THE HUMBER ESTUARY SPECIAL AREA OF CONSERVATION (SAC) MAP & CITATION



Key:
Humber Estuary SAC
Order Limits

| | |
|---------|---------------------------|
| Project | Little Crow Solar Park |
| Title | Humber Estuary SAC Extent |
| Date | 05/05/2021 |
| Scale | 1:110000 on A0 |



CLARKSON
& WOODS
ECOLOGICAL CONSULTANTS

EC Directive 92/43 on the Conservation of Natural Habitats and of Wild Fauna and Flora

Citation for Special Area of Conservation (SAC)

| | |
|----------------------------------|---|
| Name: | Humber Estuary |
| Unitary Authority/County: | City of Kingston upon Hull, East Riding of Yorkshire, Lincolnshire, North East Lincolnshire, North Lincolnshire |
| SAC status: | Designated on 10 December 2009 |
| Grid reference: | TA345110 |
| SAC EU code: | UK0030170 |
| Area (ha): | 36657.15 |
| Component SSSI: | Humber Estuary |

Site description:

The Humber is the second largest coastal plain **Estuary** in the UK, and the largest coastal plain estuary on the east coast of Britain. The estuary supports a full range of saline conditions from the open coast to the limit of saline intrusion on the tidal rivers of the Ouse and Trent. The range of salinity, substrate and exposure to wave action influences the estuarine habitats and the range of species that utilise them; these include a breeding bird assemblage, winter and passage waterfowl, river and sea lamprey, grey seals, vascular plants and invertebrates.

The Humber is a muddy, macro-tidal estuary, fed by a number of rivers including the Rivers Ouse, Trent and Hull. Suspended sediment concentrations are high, and are derived from a variety of sources, including marine sediments and eroding boulder clay along the Holderness coast. This is the northernmost of the English east coast estuaries whose structure and function is intimately linked with soft eroding shorelines. The extensive mud and sand flats support a range of benthic communities, which in turn are an important feeding resource for birds and fish. Wave exposed sandy shores are found in the outer/open coast areas of the estuary. These change to the more moderately exposed sandy shores and then to sheltered muddy shores within the main body of the estuary and up into the tidal rivers.

Habitats within the Humber Estuary include **Atlantic salt meadows** and a range of sand dune types in the outer estuary, together with **Sandbanks which are slightly covered by sea water all the time**, extensive intertidal mudflats, **Salicornia and other annuals colonising mud and sand**, and **Coastal lagoons**. As salinity declines upstream, reedbeds and brackish saltmarsh communities fringe the estuary. These are best-represented at the confluence of the Rivers Ouse and Trent at Blacktoft Sands.

Upstream from the Humber Bridge, the navigation channel undergoes major shifts from north to south banks, for reasons that have yet to be fully explained. This section of the estuary is also noteworthy for extensive mud and sand bars, which in places form semi-permanent islands. The sand dunes are features of the outer estuary on both the north and south banks particularly on Spurn peninsula and along the Lincolnshire coast south of Cleethorpes. Examples of both **Fixed dunes with herbaceous vegetation (‘grey dunes’)** and **Shifting dunes along the shoreline with *Ammophila arenaria* (‘white dunes’)** occur on both banks of the estuary and along the coast. Native sea buckthorn **Dunes with *Hippophae rhamnoides*** also occurs on both sides of the estuary.

Significant fish species include **river lamprey *Lampetra fluviatilis*** and **sea lamprey *Petromyzon marinus*** which breed in the River Derwent, a tributary of the River Ouse. **Grey seals *Halichoerus grypus*** come ashore in autumn to form breeding colonies on the sandy shores of the south bank at Donna Nook.

Qualifying habitats: The site is designated under **article 4(4)** of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I:


- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- Coastal lagoons*
- Dunes with *Hippophae rhamnoides*
- Embryonic shifting dunes
- Estuaries
- Mudflats and sandflats not covered by seawater at low tide
- Fixed dunes with herbaceous vegetation ('grey dunes')*
- *Salicornia* and other annuals colonising mud and sand
- Sandbanks which are slightly covered by sea water all the time
- Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes')

Qualifying species: The site is designated under **article 4(4)** of the Directive (92/43/EEC) as it hosts the following species listed in Annex II:

- Grey seal *Halichoerus grypus*
- River lamprey *Lampetra fluviatilis*
- Sea lamprey *Petromyzon marinus*

Annex I priority habitats are denoted by an asterisk (*)

This citation relates to a site entered in the Register of European Sites for Great Britain.
Register reference number: UK0030170
Date of registration: 10 December 2009

Signed: 
On behalf of the Secretary of State for
Environment, Food and Rural Affairs

APPENDIX 9: THE HUMBER ESTUARY SPECIAL PROTECTION AREA (SPA) MAP & CITATION



Key:
■ Humber Estuary SPA
□ Order Limits

| | |
|---------|---------------------------|
| Project | Little onp Svalar Asrk |
| Title | Humber Estuary SAC Extent |
| Date | 05/05/2021 |
| Scale | 1:110000 w/ CO |



EC Directive 79/409 on the Conservation of Wild Birds Special Protection Area (SPA)

Name: Humber Estuary

Unitary Authorities/Counties: City of Kingston-upon-Hull, East Riding of Yorkshire, Lincolnshire, North East Lincolnshire, North Lincolnshire

Component SSSIs: The SPA encompasses all or parts of the following Sites of Special Scientific Interest (SSSIs): Humber Estuary SSSI, North Killingholme Haven Pits SSSI, Saltfleetby-Theddlethorpe Dunes SSSI, and The Lagoons SSSI.

Site description: The Humber Estuary is located on the east coast of England, and comprises extensive wetland and coastal habitats. The inner estuary supports extensive areas of reedbed, with areas of mature and developing saltmarsh backed by grazing marsh in the middle and outer estuary. On the north Lincolnshire coast, the saltmarsh is backed by low sand dunes with marshy slacks and brackish pools. Parts of the estuary are owned and managed by conservation organisations. The estuary supports important numbers of waterbirds (especially geese, ducks and waders) during the migration periods and in winter. In summer, it supports important breeding populations of bittern *Botaurus stellaris*, marsh harrier *Circus aeruginosus*, avocet *Recurvirostra avosetta* and little tern *Sterna albifrons*.

Size of SPA: The SPA covers an area of 37,630.24 ha.

Qualifying species:

The site qualifies under **article 4.1** of the Directive (79/409/EEC) as it is used regularly by 1% or more of the Great Britain populations of the following species listed in Annex I in any season:

| Annex I species | Count and season | Period | % of GB population |
|--|-----------------------------------|---------------------------------------|--------------------|
| Avocet <i>Recurvirostra avosetta</i> | 59 individuals – wintering | 5 year peak mean 1996/97 – 2000/01 | 1.7% |
| Bittern <i>Botaurus stellaris</i> | 4 individuals – wintering | 5 year peak mean 1998/99 – 2002/03 | 4.0% |
| Hen harrier <i>Circus cyaneus</i> | 8 individuals – wintering | 5 year peak mean 1997/98 – 2001/02 | 1.1% |
| Golden plover <i>Pluvialis apricaria</i> | 30,709 individuals – wintering | 5 year peak mean 1996/97 – 2000/01 | 12.3% |
| Bar-tailed godwit <i>Limosa lapponica</i> | 2,752 individuals – wintering | 5 year peak mean 1996/97 – 2000/01 | 4.4% |
| Ruff <i>Philomachus pugnax</i> | 128 individuals – passage | 5 year peak mean 1996-2000 | 1.4% |
| Bittern <i>Botaurus stellaris</i> | 2 booming males – breeding | 3 year mean 2000-2002 | 10.5% |
| Marsh harrier <i>Circus aeruginosus</i> | 10 females – breeding | 5 year mean 1998-2002 | 6.3% |
| Avocet <i>Recurvirostra avosetta</i> | 64 pairs – breeding | 5 year mean 1998 – 2002 | 8.6% |
| Little tern <i>Sterna albifrons</i> | 51 pairs – breeding | 5 year mean 1998-2002 | 2.1% |

The site qualifies under **article 4.2** of the Directive (79/409/EEC) as it is used regularly by 1% or more of the biogeographical populations of the following regularly occurring migratory species (other than those listed in Annex I) in any season:

| Migratory species | Count and season | Period | % of subspecies/ population |
|---|-----------------------------------|---------------------------------------|---|
| Shelduck <i>Tadorna tadorna</i> | 4,464 individuals – wintering | 5 year peak mean 1996/97 – 2000/01 | 1.5% Northwestern Europe (breeding) |
| Knot <i>Calidris canutus</i> | 28,165 individuals – wintering | 5 year peak mean 1996/97 – 2000/01 | 6.3% <i>islandica</i> |
| Dunlin <i>Calidris alpina</i> | 22,222 individuals – wintering | 5 year peak mean 1996/97 – 2000/01 | 1.7% <i>alpina</i> , Western Europe (non-breeding) |
| Black-tailed godwit <i>Limosa limosa</i> | 1,113 individuals – wintering | 5 year peak mean 1996/97 – 2000/01 | 3.2% <i>islandica</i> |
| Redshank <i>Tringa totanus</i> | 4,632 individuals – wintering | 5 year peak mean 1996/97 – 2000/01 | 3.6% <i>britannica</i> |
| Knot <i>Calidris canutus</i> | 18,500 individuals – passage | 5 year peak mean 1996 – 2000 | 4.1% <i>islandica</i> |
| Dunlin <i>Calidris alpina</i> | 20,269 individuals – passage | 5 year peak mean 1996 – 2000 | 1.5% <i>alpina</i> , Western Europe (non-breeding) |
| Black-tailed godwit <i>Limosa limosa</i> | 915 individuals – passage | 5 year peak mean 1996 – 2000 | 2.6% <i>islandica</i> |
| Redshank <i>Tringa totanus</i> | 7,462 individuals – passage | 5 year peak mean 1996 – 2000 | 5.7% <i>britannica</i> |

Bird counts from: Wetland Bird Survey (WeBS) database and *The Humber Estuary: A comprehensive review of its nature conservation interest* (Allen et al. 2003).

Assemblage qualification:

The site qualifies under **article 4.2** of the Directive (79/409/EEC) as it is used regularly by over 20,000 waterbirds (waterbirds as defined by the Ramsar Convention) in any season:

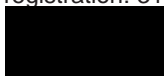
In the non-breeding season, the area regularly supports 153,934 individual waterbirds (five year peak mean 1996/97 – 2000/01), including dark-bellied brent goose *Branta bernicla bernicla*, shelduck *Tadorna tadorna*, wigeon *Anas penelope*, teal *Anas crecca*, mallard *Anas platyrhynchos*, pochard *Aythya ferina*, scaup *Aythya marila*, goldeneye *Bucephala clangula*, bittern *Botaurus stellaris*, oystercatcher *Haematopus ostralegus*, avocet *Recurvirostra avosetta*, ringed plover *Charadrius hiaticula*, golden plover *Pluvialis apricaria*, grey plover *P. squatarola*, lapwing *Vanellus vanellus*, knot *Calidris canutus*, sanderling *C. alba*, dunlin *C. alpina*, ruff *Philomachus pugnax*, black-tailed godwit *Limosa limosa*, bar-tailed godwit *L. lapponica*, whimbrel *Numenius phaeopus*, curlew *N. arquata*, redshank *Tringa totanus*, greenshank *T. nebularia* and turnstone *Arenaria interpres*.

Non-qualifying species of interest: The SPA is used by non-breeding merlin *Falco columbarius*, peregrine *F. peregrinus* and short-eared owl *Asio flammeus*, and breeding common tern *Sterna hirundo* and kingfisher *Alcedo atthis* (all species listed in Annex I to the EC Birds Directive) in numbers of less than European importance (less than 1% of the GB population).

Status of SPA:

- 1) Humber Flats, Marshes and Coast (Phase 1) SPA was classified on 28 July 1994.
- 2) The extended and renamed Humber Estuary SPA was classified on 31 August 2007.

This citation relates to a site entered in the Register of European Sites for Great Britain.
Register reference number: UK9006111
Date of registration: 31 August 2007

Signed: 
On behalf of the Secretary of State for
Environment, Food and Rural Affairs

APPENDIX 10: THE HUMBER ESTUARY RAMSAR SITE MAP & CITATION



| | |
|---------|------------------------------|
| Project | Little Crow Solar Park |
| Title | Humber Estuary Ramsar Extent |
| Date | 05/05/2021 |
| Scale | 1:110000 on A0 |



Key:

| | |
|--|-----------------------|
| | Humber Estuary Ramsar |
| | Order Limits |

Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX.22 of the 9th Conference of the Contracting Parties (2005).

Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

1. Name and address of the compiler of this form:

Joint Nature Conservation Committee
Monkstone House
City Road
Peterborough
Cambridgeshire PE1 1JY
UK
Telephone/Fax: +44 (0)1733 – 562 626 / +44 (0)1733 – 555 948
Email: RIS@JNCC.gov.uk

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DD MM YY

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Designation date

| | | | | | |
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| | | | | | |
|--|--|--|--|--|--|

Site Reference Number

2. Date this sheet was completed/updated:

Designated: 31 August 2007

3. Country:

UK (England)

4. Name of the Ramsar site:

Humber Estuary

5. Designation of new Ramsar site or update of existing site:

This RIS is for: Updated information on an existing Ramsar site

6. For RIS updates only, changes to the site since its designation or earlier update:

a) Site boundary and area:

The boundary has been extended

** Important note: If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

Deleted: 15/10/2007

No major changes to the ecological character of the site but the revised criteria for wetland habitats and non-avian species have now been applied and additional features selected accordingly

7. Map of site included:

Refer to Annex III of the *Explanatory Notes and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

a) A map of the site, with clearly delineated boundaries, is included as:

- i) **hard copy** (required for inclusion of site in the Ramsar List): yes ✓ -or- no ;
- ii) **an electronic format** (e.g. a JPEG or ArcView image) Yes
- iii) **a GIS file providing geo-referenced site boundary vectors and attribute tables** yes ✓ -or- no ;

b) Describe briefly the type of boundary delineation applied:

e.g. the boundary is the same as an existing protected area (nature reserve, national park etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The site boundary is the same as, or falls within, an existing protected area.

For precise boundary details, please refer to paper map provided at designation

8. Geographical coordinates (latitude/longitude):

053 32 59 N 000 03 25 E

9. General location:

Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

Nearest town/city: Kingston-upon-Hull

The Humber Estuary is located on the boundary between the East Midlands Region and the Yorkshire and the Humber Region, on the east coast of England bordering the North Sea.

Administrative region: City of Kingston upon Hull; East Riding of Yorkshire; Humberside; Lincolnshire; North East Lincolnshire; North Lincolnshire

10. Elevation (average and/or max. & min.) (metres): 11. Area (hectares): 37988

| | |
|------|--------------------------|
| Min. | -13 |
| Max. | 10 |
| Mean | No information available |

12. General overview of the site:

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

The Humber Estuary is the largest macro-tidal estuary on the British North Sea coast. It drains a catchment of some 24,240 square kilometres and is the site of the largest single input of freshwater from Britain into the North Sea. It has the second-highest tidal range in Britain (max 7.4 m) and approximately one-third of the estuary is exposed as mud or sand flats at low tide. The inner estuary supports extensive areas of reedbed with areas of mature and developing saltmarsh backed in places by limited areas of grazing marsh in the middle and outer estuary. On the north Lincolnshire coast the saltmarsh is backed by low sand dunes with marshy slacks and brackish pools. The Estuary regularly supports internationally important numbers of waterfowl in winter and nationally important breeding populations in summer.

13. Ramsar Criteria:

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

1, 3, 5, 6, 8

Deleted: 15/10/2007

Secretariat comment: The RIS provides information requiring the application of Criterion 4. This needs to be included in the next update.

14. Justification for the application of each Criterion listed in 13 above:

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Ramsar criterion 1

The site is a representative example of a near-natural estuary with the following component habitats: dune systems and humid dune slacks, estuarine waters, intertidal mud and sand flats, saltmarshes, and coastal brackish/saline lagoons.

It is a large macro-tidal coastal plain estuary with high suspended sediment loads, which feed a dynamic and rapidly changing system of accreting and eroding intertidal and subtidal mudflats, sandflats, saltmarsh and reedbeds. Examples of both strandline, foredune, mobile, semi-fixed dunes, fixed dunes and dune grassland occur on both banks of the estuary and along the coast. The estuary supports a full range of saline conditions from the open coast to the limit of saline intrusion on the tidal rivers of the Ouse and Trent. Wave exposed sandy shores are found in the outer/open coast areas of the estuary. These change to the more moderately exposed sandy shores and then to sheltered muddy shores within the main body of the estuary and up into the tidal rivers. The lower saltmarsh of the Humber is dominated by common cordgrass *Spartina anglica* and annual glasswort *Salicornia* communities. Low to mid marsh communities are mostly represented by sea aster *Aster tripolium*, common saltmarsh grass *Puccinellia maritima* and sea purslane *Atriplex portulacoides* communities. The upper portion of the saltmarsh community is atypical, dominated by sea couch *Elytrigia atherica* (*Elymus pycnanthus*) saltmarsh community. In the upper reaches of the estuary, the tidal marsh community is dominated by the common reed *Phragmites australis* fen and sea club rush *Bolboschoenus maritimus* swamp with the couch grass *Elytrigia repens* (*Elymus repens*) saltmarsh community. Within the Humber Estuary Ramsar site there are good examples of four of the five physiographic types of saline lagoon.

Ramsar criterion 3

The Humber Estuary Ramsar site supports a breeding colony of grey seals *Halichoerus grypus* at Donna Nook. It is the second largest grey seal colony in England and the furthest south regular breeding site on the east coast. The dune slacks at Saltfleetby-Theddlethorpe on the southern extremity of the Ramsar site are the most north-easterly breeding site in Great Britain of the natterjack toad *Bufo calamita*.

Ramsar criterion 5

Assemblages of international importance:

153,934 waterfowl, non-breeding season
(5 year peak mean 1996/97-2000/2001)

Ramsar criterion 6 – species/populations occurring at levels of international importance.

Common shelduck, *Tadorna tadorna*

Northwestern Europe (breeding) population

4,464 individuals, wintering, representing an average of 1.5% of the population
(5 year peak mean 1996/7-2000/1)

Eurasian golden plover, *Pluvialis apricaria*

altifrons subspecies – NW Europe, W Continental Europe, NW Africa population

30,709 individuals, wintering, representing an average of 3.3% of the population
(5 year peak mean 1996/7-2000/1)

Red knot, *Calidris canutus*

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islandica subspecies

28,165 individuals, wintering, representing an average of 6.3% of the population
(5 year peak mean 1996/7-2000/1)

Dunlin, *Calidris alpina*

alpina subspecies – Western Europe (non-breeding) population

22,222 individuals, wintering, representing an average of 1.7% of the population
(5 year peak mean 1996/7-2000/1)

Black-tailed godwit, *Limosa limosa*

islandica subspecies

1,113 individuals, wintering, representing an average of 3.2% of the population
(5 year peak mean 1996/7-2000/1)

Bar-tailed godwit, *Limosa lapponica*

lapponica subspecies

2,752 individuals, wintering, representing an average of 2.3% of the population
(5 year peak mean 1996/7-2000/1)

Common redshank, *Tringa totanus*

britannica subspecies

4,632 individuals, wintering, representing an average of 3.6% of the population
(5 year peak mean 1996/7-2000/1)

Ramsar criterion 8

The Humber Estuary acts as an important migration route for both river lamprey *Lampetra fluviatilis* and sea lamprey *Petromyzon marinus* between coastal waters and their spawning areas.

15. Biogeography (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

a) biogeographic region:

Atlantic

b) biogeographic regionalisation scheme (include reference citation):

Council Directive 92/43/EEC

16. Physical features of the site:

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

| | |
|-----------------------------|---|
| Soil & geology | neutral, shingle, sand, mud, clay, alluvium, sedimentary, sandstone, sandstone/mudstone, limestone/chalk, gravel, nutrient-rich |
| Geomorphology and landscape | lowland, coastal, floodplain, shingle bar, intertidal sediments (including sandflat/mudflat), estuary, islands, cliffs |
| Nutrient status | eutrophic |

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| | |
|-----------------------------------|--|
| pH | circumneutral |
| Salinity | brackish / mixosaline, fresh, saline / euhaline |
| Soil | mainly mineral |
| Water permanence | usually permanent |
| Summary of main climatic features | Annual averages (Cleethorpes, 1971–2000) (www.metoffice.com/climate/uk/averages/19712000/sites/cleethorpes.html) Max. daily temperature: 13.1° C Min. daily temperature: 6.4° C Days of air frost: 29.0 Rainfall: 565.4 mm Hrs. of sunshine: 1521.9 |

General description of the Physical Features:

The Humber estuary is approximately 70 km long from the limit of saline intrusion on the River Ouse at Boothferry to the estuary mouth at Spurn Head, where it enters the North Sea. The area of the estuary is approx. 365 km², and it has a width of 6.6 km at the mouth.

The Humber is a macro-tidal estuary with a tidal range of 7.4 m, the second-largest range in the UK and comparable to other macro-tidal estuaries worldwide. It is a shallow and well mixed estuary, with an average depth of 6.5m rising to 13.2 m at the mouth.

The Humber is the second-largest coastal plain estuary in the UK, and the largest coastal plain estuary on the east coast of Britain. Suspended sediment concentrations are high, and are derived from a variety of sources, including marine sediments and eroding boulder clay along the Holderness coast. This is the northernmost of the English east coast estuaries whose structure and function is intimately linked with soft eroding shorelines.

Upstream from the Humber Bridge, the navigation channel undergoes major shifts from north to south banks. This section of the estuary is noteworthy for extensive mud and sand bars, which in places form semi-permanent islands.

The estuary covers the full salinity range from fully marine at the mouth of the estuary (Spurn Head) to the limit of saline intrusion on the Rivers Ouse and Trent). A salinity gradient from north to south bank is observed in the outer estuary, due to the incoming tide flowing along the north bank, while the fresh water keeps to the south bank as it discharges to the sea. As salinity declines upstream, reedbeds and brackish saltmarsh communities fringe the estuary..

17. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

The Humber catchment covers an area of ca. 24,240 km², more than 20% of the land area of England. Average annual precipitation in the upland areas of the catchment is as much as 1000 mm. Average freshwater flow into the Humber estuary from the rivers is 250 m³s⁻¹, ranging from 60 m³s⁻¹ in drier periods to 450 m³s⁻¹ in wet periods. Peak flows of up to 1500 m³s⁻¹ have been recorded during floods. The rivers Trent and Ouse, which provide the main fresh water flow into the Humber, drain large industrial and urban areas to the south and west (River Trent), and less densely populated agricultural areas to the north and west (River Ouse). The Trent/Ouse confluence is known as Trent Falls.

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On the north bank of the Humber estuary the principal river is the river Hull, which flows through the city of Kingston-upon-Hull, and has a tidal length of 32 km, up to the Hempholme Weir. The Hull provides only about 1% of the freshwater input to the estuary. On the south bank, the River Ancholme enters the Humber at South Ferriby, but the tide is excluded by a sluice and a tidal lock. Altogether, the total tidal length of rivers and estuary is 313 km.

There are several major urban centres within the river catchments. Nottingham, Leicester, and the West Midlands/Birmingham conurbation are drained by the Trent, the Leeds-Bradford area in West Yorkshire is drained by the Aire/Calder and the Sheffield/Rotherham/Doncaster area in South Yorkshire is drained by the Don. There are also large rural regions, whose populations are currently experiencing high population growth, while the urban areas are showing a small decline. The 1992 population for the Ouse catchment was 4.1 million, and for the Trent catchment was 7.1 million. The population of Humberside, which comprises North and North-east Lincolnshire, the East Riding of Yorkshire, and Kingston-upon-Hull (Hull), was just under 0.9 million. Land use around the estuary itself is 50-98% agricultural, within only two areas of high population/ industry – the major conurbation around Kingston-upon-Hull (Hull) on the north bank, and several large industrial areas around Grimsby/ Immingham/ Cleesthorpes on the south bank.

The area around the Humber estuary is low-lying, and much land-claim of wetlands and supratidal zones, as well as parts of the intertidal zone, was carried out in the past two centuries. The mid to outer estuary (Humber Bridge to Spurn Point) changed from a region of low water erosion in the 19th century to one of accretion in the 20th century, nonetheless a net loss of intertidal zone of some 3000 ha has taken place since the mid-19th century. Around the estuary some 894 km² of land are below the 5 m contour, protected by extensive coastal defences. Most of the sediment entering the estuary comes from the North Sea, and a large part of it is believed to come from the continuing erosion of the Holderness Cliffs, which form the coastline to the north of the estuary mouth at Spurn Head. The estuary currently has approximately 1,775 ha of saltmarsh

18. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

Sediment trapping

19. Wetland types:

Marine/coastal wetland

| Code | Name | % Area |
|-------|--|--------|
| F | Estuarine waters | 66.8 |
| G | Tidal flats | 26.4 |
| H | Salt marshes | 4.7 |
| E | Sand / shingle shores (including dune systems) | 0.8 |
| 7 | Gravel / brick / clay pits | 0.5 |
| Q | Saline / brackish lakes: permanent | 0.3 |
| J | Coastal brackish / saline lagoons | 0.3 |
| Other | Other | 0.1 |
| 9 | Canals and drainage channels | 0.01 |
| Y | Freshwater springs | 0.01 |

20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

Description

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Much of the intertidal area of the Humber Estuary consists of mudflats with fringing saltmarsh. There are smaller areas of intertidal sand flats, and sand dunes. The saltmarsh is both eroding and accreting; although coastal squeeze is resulting in net losses, and cord grass *Spartina anglica* is a major colonising species. In areas of reduced salinity such as the Upper Humber there are extensive areas of common reed *Phragmites australis* with some sea club-rush *Bolboschoenus maritimus*. Mid-level saltmarsh tends to be much more floristically diverse, and in the higher level marsh with its dendritic network of drainage channels, salt pans and borrow pits grasses dominate with thrift *Armeria maritima* where the marsh is grazed by cattle and sheep. Extensive areas of eel grass *Zostera marina* and *Z. nolti* have been known to occur at Spurn Bight, although in recent years records are limited. Behind the sandflats of the Cleethorpes coast the mature sand-dune vegetation contains some locally and nationally rare species including chestnut flat sedge *Blysmus rufus*, bulbous meadow grass *Poa bulbosa* and dense silky-bent *Apera interrupta*. The sand dunes, which cap the shingle spit that forms Spurn Peninsula are dominated by marram grass *Ammophila arenaria* and patches of dense sea buckthorn *Hippophae rhamnoides*.

Ecosystem services

Aesthetic

Education

Food

Recreation

Storm/wave protection

21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

See point 14 –Criterion 1

22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

Species Information

Species Information

Birds

Species currently occurring at levels of national importance:

Great bittern, *Botaurus stellaris*

stellaris subspecies – W Europe, NW Africa (breeding) population

2 booming males, breeding, representing an average of 10.5% of the GB population

(3 year mean 2000-2002)

Eurasian marsh harrier, *Circus aeruginosus*

Europe population

10 females, breeding, representing an average of 6.3% of the GB population

(5 year mean 1998-2002)

Pied avocet, *Recurvirostra avosetta*

Western Europe (breeding) population

64 pairs, breeding, representing an average of 8.6% of the GB population

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(5 year mean 1998-2002)

Little tern, *Sterna albifrons*
albifrons subspecies, Western Europe (breeding) population
 51 pairs, breeding, representing an average of 2.1% of the GB population
 (5 year mean 1998-2002)

Dark-bellied brent goose, *Branta bernicla*
bernicla subspecies
 2,098 individuals, wintering, representing an average of 2.1% of the GB population
 (5 year peak mean 1996/7-2000/1)

Eurasian wigeon, *Anas penelope*
 Northwestern Europe (non-breeding) population
 5,044 individuals, wintering, representing an average of 1.2% of the GB population
 (5 year peak mean 1996/7-2000/1)

Common teal, *Anas crecca*
crecca subspecies, Northwestern Europe (non-breeding population)
 2,322 individuals, wintering, representing an average of 1.2% of the GB population
 (5 year peak mean 1996/7-2000/1)

Common pochard, *Aythya ferina*
 Northeastern & Northwestern Europe (non-breeding) population
 719 individuals, wintering, representing an average of 1.2% of the GB population
 (5 year peak mean 1996/7-2000/1)

Greater scaup, *Aythya marila*
marila subspecies, Western Europe (non-breeding) population
 127 individuals, wintering, representing an average of 1.7% of the GB population
 (5 year peak mean 1996/7-2000/1)

Common goldeneye, *Bucephala clangula*
clangula subspecies, Northwestern & Central Europe (non-breeding) population
 467 individuals, wintering, representing an average of 1.9% of the GB population
 (5 year peak mean 1996/7-2000/1)

Great bittern, *Botaurus stellaris*
stellaris subspecies – W Europe, NW Africa (breeding) population
 4 individuals, wintering, representing an average of 4.0% of the GB population
 (5 year peak mean 1998/9-2002/3)

Hen harrier, *Circus cyaneus*
 Europe population
 8 individuals, wintering, representing an average of 1.1% of the GB population
 (5 year peak mean 1997/8-2001/2)

Eurasian oystercatcher, *Haematopus ostralegus*
ostralegus subspecies
 3,503 individuals, wintering, representing an average of 1.1% of the GB population
 (5 year peak mean 1996/7-2000/1)

Pied avocet, *Recurvirostra avosetta*
 Western Europe (breeding) population
 59 individuals, wintering, representing an average of 1.7% of the GB population

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(5 year peak mean 1996/7-2000/1)

Great ringed plover, *Charadrius hiaticula*
hiaticula subspecies

403 individuals, wintering, representing an average of 1.2% of the GB population
(5 year peak mean 1996/7-2000/1)

Grey plover, *Pluvialis squatarola*
squatarola subspecies, Eastern Atlantic (non-breeding) population

1,704 individuals, wintering, representing an average of 3.2% of the GB population
(5 year peak mean 1996/7-2000/1)

Northern lapwing, *Vanellus vanellus*

Europe (breeding) population

22,765 individuals, wintering, representing an average of 1.1% of the GB population
(5 year peak mean 1996/7-2000/1)

Sanderling, *Calidris alba*

Eastern Atlantic (non-breeding) population

486 individuals, wintering, representing an average of 2.3% of the GB population
(5 year peak mean 1996/7-2000/1)

Eurasian curlew, *Numenius arquata*

arquata subspecies

3,253 individuals, wintering, representing an average of 2.2% of the GB population
(5 year peak mean 1996/7-2000/1)

Ruddy turnstone, *Arenaria interpres*

interpres subspecies, Northeastern Canada & Greenland (breeding) population

629 individuals, wintering, representing an average of 1.3% of the GB population
(5 year peak mean 1996/7-2000/1)

Great ringed plover, *Charadrius hiaticula*

psammodroma subspecies

1,766 individuals, passage, representing an average of 5.9% of the GB population
(5 year peak mean 1996-2000)

Grey plover, *Pluvialis squatarola*

squatarola subspecies, Eastern Atlantic (non-breeding) population

1,590 individuals, passage, representing an average of 2.3% of the GB population
(5 year peak mean 1996-2000)

Sanderling, *Calidris alba*

Eastern Atlantic (non-breeding) population

818 individuals, passage, representing an average of 2.7% of the GB population
(5 year peak mean 1996-2000)

Ruff, *Philomachus pugnax*

Western Africa (non-breeding) population

128 individuals, passage, representing an average of 1.4% of the GB population
(5 year peak mean 1996-2000)

Whimbrel, *Numenius phaeopus*

islandicus subspecies

113 individuals, passage, representing an average of 2.3% of the GB population

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(5 year peak mean 1996-2000)

Common greenshank, *Tringa nebularia*
 Northwestern Europe (breeding) population
 77 individuals, passage, representing an average of 5.5% of the GB population
 (5 year peak mean 1996-2000)

23. Social and cultural values:

Describe if the site has any general social and/or cultural values e.g. fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values.

- Aesthetic
- Aquatic vegetation (e.g. reeds, willows, seaweed)
- Archaeological/historical site
- Environmental education/ interpretation
- Fisheries production
- Livestock grazing
- Non-consumptive recreation
- Sport fishing
- Sport hunting
- Tourism
- Transportation/navigation

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? **No**

If Yes, describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

24. Land tenure/ownership:

| Ownership category | On-site | Off-site |
|-------------------------------------|---------|----------|
| Non-governmental organisation (NGO) | + | + |
| Local authority, municipality etc. | + | + |
| National/Crown Estate | + | + |
| Private | + | + |
| Public/communal | + | + |

25. Current land (including water) use:

| Activity | On-site | Off-site |
|----------|---------|----------|
| | | |

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| | | |
|---|---|---|
| Nature conservation | + | + |
| Tourism | + | + |
| Current scientific research | + | + |
| Recreation | + | + |
| Cutting of vegetation (small-scale/subsistence) | + | |
| Fishing: commercial | + | + |
| Fishing: recreational/sport | + | + |
| Gathering of shellfish | + | + |
| Bait collection | + | + |
| Permanent arable agriculture | | + |
| Permanent pastoral agriculture | + | + |
| Hunting: recreational/sport | + | + |
| Industrial water supply | + | + |
| Industry | + | + |
| Sewage treatment/disposal | + | + |
| Harbour/port | + | + |
| Flood control | + | + |
| Irrigation (incl. agricultural water supply) | | + |
| Mineral exploration (excl. hydrocarbons) | | + |
| Oil/gas production | + | + |
| Transport route | + | + |
| Domestic water supply | | + |
| Urban development | | + |
| Non-urbanised settlements | | + |
| Military activities | + | + |
| Horticulture (incl. market gardening) | | + |

26. Factors (past, present or potential) adversely affecting the site’s ecological character, including changes in land (including water) use and development projects:

Explanation of reporting category:

1. *Those factors that are still operating, but it is unclear if they are under control, as there is a lag in showing the management or regulatory regime to be successful.*
2. *Those factors that are not currently being managed, or where the regulatory regime appears to have been ineffective so far.*

NA = Not Applicable because no factors have been reported.

| Adverse Factor Category | Reporting Category | Description of the problem (Newly reported Factors only) | On-Site | Off-Site | Major Impact? |
|--|--------------------|--|---------|----------|---------------|
| Disturbance to vegetation through cutting / clearing | 1 | Reedbeds being cut and cleared on margins of pits associated with angling. Management agreements and enforcement to address. | + | | |
| Vegetation succession | 1 | Lack of reedbed management leading to scrub encroachment. Management agreement to address. | + | | |

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| | | | | | |
|--|---|--|---|---|---|
| Water diversion for irrigation/domestic/industrial use | 1 | Abstraction causes reduced freshwater input. Review of consents well advanced but not yet implemented. | + | + | |
| Overfishing | 2 | Substantial lamprey by-catch in eel nets in River Ouse. | | + | |
| Pollution – domestic sewage | 1 | Reduced dissolved oxygen in River Ouse is a barrier to fish migration. Review of consents well advanced but not yet implemented. | + | + | + |
| Pollution – agricultural fertilisers | 1 | Reduced dissolved oxygen in River Ouse is a barrier to fish migration. To be addressed through Catchment Sensitive Farming Initiatives and implementation of Water Framework Directive. | + | + | + |
| Recreational/tourism disturbance (unspecified) | 1 | Particularly illegal access by motorised recreational vehicles and craft. Control through management scheme. | + | | |
| Other factor | 1 | Coastal squeeze causing loss of intertidal habitats and saltmarsh due to sea level rise and fixed defences. The Humber Flood Risk Management Strategy has been developed and is being implemented. | + | | + |
| | | | | | |

For category 2 factors only.
 What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors?
 Overfishing - Overfishing – to be considered through an ‘in-combination’ assessment of possible factors as part of the Review of Consents exercise.

Is the site subject to adverse ecological change? YES

27. Conservation measures taken:

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

| Conservation measure | On-site | Off-site |
|---|---------|----------|
| Site/ Area of Special Scientific Interest (SSSI/ASSI) | + | + |
| National Nature Reserve (NNR) | + | |
| Special Protection Area (SPA) | + | |
| Land owned by a non-governmental organisation for nature conservation | + | + |
| Management agreement | + | + |
| Site management statement/plan implemented | + | |
| Area of Outstanding National Beauty (AONB) | | + |
| Special Area of Conservation (SAC) | + | |
| IUCN (1994) category IV | + | |

b) Describe any other current management practices:

The management of Ramsar sites in the UK is determined by either a formal management plan or through other management planning processes, and is overseen by the relevant statutory conservation agency. Details of the precise management practises are given in these documents.

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28. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

No information available

29. Current scientific research and facilities:

e.g. details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

Fauna.

Numbers of migratory and wintering wildfowl and waders are monitored annually as part of the national Wetland Birds Survey (WeBS) organised by the British Trust for Ornithology, Wildfowl & Wetlands Trust, the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee.

Seal populations are monitored by the Sea Mammal Research Unit
 Humber Wader Ringing Group
 Spurn Bird Observatory
 National Nature Reserve monitoring

Environment.

Institute of Estuarine & Coastal Studies, Hull: various
 Industrial Concerns: monitoring on behalf of companies such as Associated British Ports and BP
 Environment Agency monitoring: various
 Geomorphological studies associated with shoreline management planning
 National Nature Reserve monitoring

30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:

e.g. visitor centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

There are a four National Nature Reserves with associated facilities within the Ramsar site (Spurn, Far Ings, Donna Nook and Saltfleetby – Theddlethorpe Dunes) and a number of other visitor, information and/or education centres including the Spurn Bird Observatory, the Cleethorpes Discovery Centre, Water’s Edge and Far Ings. A wide range of Humber wide and area-specific information is available through a range of media (eg leaflets, displays, internet etc) including ‘Humber Estuary European Marine Site Codes of Conduct’ developed with a range of stakeholders to cover a range of recreational and educational activities and ‘Coastal Futures’ – a partnership project working with local communities affected by flood risk and associated issues including managed realignment includes proactive education work within schools.

31. Current recreation and tourism:

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

Activities, Facilities provided and Seasonality.

Sailing: marinas at Brough, Winteringham, Hull, Grimsby and South Ferriby.
 Bathing etc: Cleethorpes (some 6m visitors/yr).
 Walking/Horse riding: throughout
 Beach fishing, match sea-fishing, non-commercial bait digging.
 Non-commercial samphire collection
 Wildfowling
 Tourist amusements: Cleethorpes.
 Bird watching: throughout but particularly at Blacktoft Sands RSPB reserve and the four National Nature Reserves.

32. Jurisdiction:

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept. of Agriculture/Dept. of Environment, etc.

Head, International Protected Areas, Wildlife Habitats and Biodiversity Division, Department for Environment, Food and Rural Affairs,
 Zone 1/06c, Temple Quay House, 2 The Square, Temple Quay,
 Bristol, BS1 1 6EB

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33. Management authority:

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Project Manager - Designations, Natural England, Protected Areas Team, Northminster House,
Northminster, Peterborough, PE1 1UA, UK

34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

Site-relevant references

Site-relevant references

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Wetlands International. 2002. *Waterbird Population Estimates – Third Edition*. Wetlands International Global Series No. 12. Wageningen, The Netherlands.

White, LT (1998) *The Humber Wildfowl Refuge Committee Education Project* (unpublished)

Please return to: **Ramsar Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**
Telephone: +41 22 999 0170 • Fax: +41 22 999 0169 • email: ramsar@ramsar.org

APPENDIX 11: EMAIL FROM GROUP ENVIRONMENT MANAGEMENT DATED 17/05/2019

Tom Clarkson

From: Adcock, Lee [REDACTED]@Britishsteel.co.uk>
Sent: 07 May 2021 15:00
To: Tom Clarkson
Cc: David Dean; Peter Timms
Subject: RE: Pond

Hi Tom,

Typical pH from past periodic monitoring is between 10 and 13. We don't measure DOC.

Hope that helps.

Lee Adcock

Group Environment Manager
Health, Safety and Environment

Please note during the current COVID-19 pandemic, I will be working my usual office hours remotely from home. I will be online to answer all emails, and skype calls during these times and can be contacted via my mobile phone. If you are struggling to contact me, please contact Environment@Britishsteel.co.uk.

British Steel

[REDACTED]
[REDACTED]
[REDACTED]@Britishsteel.co.uk

From: Tom Clarkson [REDACTED]@clarksonwoods.co.uk>
Sent: Wednesday, May 5, 2021 7:02 PM
To: Adcock, Lee [REDACTED]@Britishsteel.co.uk>
Cc: David Dean [REDACTED]@inrgsolar.com>; Peter Timms [REDACTED]@clarksonwoods.co.uk>
Subject: RE: Pond

CAUTION: External email. Do not click on links or open attachments unless you recognise the sender and know the content is safe.

Hi Lee

Thanks for getting back to me.

The pond in question is the one circled on the attached aerial photograph. This is in Scunthorpe (for the avoidance of doubt).



Kind regards,

Kind regards,

Tom Clarkson
Clarkson & Woods Ltd.

From: Adcock, Lee [redacted] @Britishsteel.co.uk]

Sent: 05 May 2021 15:34

To: Tom Clarkson [redacted] @clarksonwoods.co.uk>

Cc: David Dean [redacted] @inrgsolar.com>; Peter Timms [redacted] @clarksonwoods.co.uk>

Subject: RE: Pond

Hi,

Can you send me an image to make sure we're talking about the same pond. It's been a long time at British Steel since 2019!

Lee Adcock

Group Environment Manager

Health, Safety and Environment

Please note during the current COVID-19 pandemic, I will be working my usual office hours remotely from home. I will be online to answer all emails, and skype calls during these times and can be contacted via my mobile phone. If you are struggling to contact me, please contact Environment@Britishsteel.co.uk.

British Steel

[Redacted]
[Redacted]
[Redacted]@Britishsteel.co.uk

From: Tom Clarkson [Redacted]@clarksonwoods.co.uk>
Sent: Wednesday, May 5, 2021 3:18 PM
To: Adcock, Lee [Redacted]@Britishsteel.co.uk>
Cc: David Dean [Redacted]@inrgsolar.com>; Peter Timms [Redacted]@clarksonwoods.co.uk>
Subject: RE: Pond

CAUTION: External email. Do not click on links or open attachments unless you recognise the sender and know the content is safe.

Dear Lee

I hope that you do not mind me contacting you directly. I have tried to call your mobile but did not leave a voice mail message.

In 2019 you were liaising with David Dean from INRG (cc'd) as we were hoping to gain access to the pond on the British Steel land which you declined on the basis of safety. This was to inform the ongoing planning application at Little Crow solar which is now with the Planning Inspectorate.

The planning inspectorate have asked us to confirm if there is any environmental information about the pond (pH, dissolved oxygen etc) which might be able to help justify the lack of survey of this pond – beyond the issue of safe access.

I was wondering if you might carry out any testing of this pond and if so, if it might be possible to provide us with some details.

Many thanks,

Tom

Tom Clarkson
Managing Director
Clarkson & Woods Ltd.

[Redacted]
[Redacted]@clarksonwoods.co.uk
W: www.clarksonwoods.co.uk



From: David Dean [redacted] <[redacted]@inrgsolar.com>

Sent: 17 May 2019 10:07

To: Tom Clarkson [redacted] <[redacted]@clarksonwoods.co.uk>; Tom Harlow [redacted] <[redacted]@inrgsolar.com>; Peter Timms [redacted] <[redacted]@clarksonwoods.co.uk>; Ian Gannon [redacted] <[redacted]@inrgsolar.com>; Gareth Roberts [redacted] <[redacted]@pegasusgroup.co.uk>

Subject: Fwd: Pond

Hi All

See below the response from British Steel.

I have spoken to Tom (Clarkson) and as we have a bird survey at the end of next week on site. I will risk access the pond to the south on Monday and they will complete to water survey later in the week.

Best Regards

David Dean

Commercial Manager

INRG Solar

[redacted]

----- Forwarded message -----

From: **Adcock, Lee** <>

Date: Fri, 17 May 2019 at 09:40

Subject: RE: Pond

To: David Dean [redacted] <[redacted]@inrgsolar.com>, Geddes, Johanna [redacted] <[redacted]@britishsteel.co.uk>

Cc: Wood, Craig [redacted] <[redacted]@britishsteel.co.uk>

Hi David,

The pond in question is a water body associated with the former quarry and active landfill at Yarborough.

There is no safe access to the pond.

Based on the above point I will be declining the request for sampling.

Lee Adcock

Group Environment Manager

British Steel

[REDACTED]

[REDACTED]

[REDACTED] [@Britishsteel.co.uk](mailto:[REDACTED]@Britishsteel.co.uk)

From: David Dean [REDACTED] [@inrgsolar.com](mailto:[REDACTED]@inrgsolar.com)>

Sent: Friday, May 17, 2019 9:09 AM

To: Geddes, Johanna [REDACTED] [@Britishsteel.co.uk](mailto:[REDACTED]@Britishsteel.co.uk)>

Cc: Adcock, Lee [REDACTED] [@Britishsteel.co.uk](mailto:[REDACTED]@Britishsteel.co.uk)>; Wood, Craig [REDACTED] [@Britishsteel.co.uk](mailto:[REDACTED]@Britishsteel.co.uk)>

Subject: Re: Pond

Hi Johanna

Many thanks for this and I look forward to speaking to Lee soon

Best Regards

David Dean

Commercial Manager

INRG Solar

[REDACTED]

On Wed, 15 May 2019 at 14:34, Geddes, Johanna [REDACTED] [@britishsteel.co.uk](mailto:[REDACTED]@britishsteel.co.uk)> wrote:

Hello David, thanks for the screenshot of the "pond" you discussed with me earlier today.

I have captured it on Google Earth and is attached.

Lee, Craig – David has asked that we give permission for a dip test to be carried out in the water as seen in the pic attached.

NLC are requesting the test be carried out for presence of Great Crested Newts as part of the Solar Farm project.

Could you please liaise with David?

Many Thanks

Johanna

Johanna Williams

Environmental Specialist - Compliance and Standards
Health, Safety & Environment

British Steel

[REDACTED]

[REDACTED]

[REDACTED] [@Britishsteel.co.uk](mailto:[REDACTED]@Britishsteel.co.uk)



Brigg Road, Scunthorpe

North Lincolnshire, DN16 1BP

BRITISHSTEEL.CO.UK

From: David Dean [REDACTED] [@inrgsolar.com](mailto:[REDACTED]@inrgsolar.com)>

Sent: Wednesday, May 15, 2019 12:01 PM

To: Geddes, Johanna [REDACTED] [@Britishsteel.co.uk](mailto:[REDACTED]@Britishsteel.co.uk)>

Subject: Pond

David Dean



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APPENDIX 12: AUTOMATIC TRAFFIC COUNT SURVEY

Scunthorpe ATC, A18

Direction: Westbound

| Hour Beginning | Sun May 09 | Mon May 10 | Tue May 11 | Wed May 12 | Thu May 13 | Fri May 14 | Sat May 15 | 5-Day Ave. | 7-Day Ave. |
|----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 00:00 | 13 | 10 | 14 | 12 | 17 | 17 | 16 | 14 | 14 |
| 01:00 | 11 | 10 | 12 | 16 | 9 | 11 | 14 | 12 | 12 |
| 02:00 | 7 | 16 | 10 | 10 | 8 | 9 | 8 | 11 | 10 |
| 03:00 | 9 | 18 | 12 | 11 | 22 | 18 | 10 | 16 | 14 |
| 04:00 | 11 | 48 | 46 | 46 | 36 | 41 | 19 | 43 | 35 |
| 05:00 | 41 | 126 | 134 | 125 | 106 | 122 | 47 | 123 | 100 |
| 06:00 | 49 | 198 | 200 | 213 | 210 | 201 | 46 | 204 | 160 |
| 07:00 | 68 | 373 | 369 | 382 | 357 | 324 | 114 | 361 | 284 |
| 08:00 | 92 | 434 | 439 | 431 | 444 | 428 | 214 | 435 | 355 |
| 09:00 | 205 | 372 | 353 | 381 | 340 | 405 | 288 | 370 | 335 |
| 10:00 | 267 | 329 | 313 | 363 | 292 | 364 | 398 | 332 | 332 |
| 11:00 | 327 | 346 | 329 | 364 | 373 | 396 | 435 | 362 | 367 |
| 12:00 | 313 | 366 | 354 | 399 | 349 | 426 | 403 | 379 | 373 |
| 13:00 | 371 | 380 | 396 | 337 | 428 | 396 | 429 | 387 | 391 |
| 14:00 | 305 | 376 | 447 | 386 | 425 | 424 | 412 | 412 | 396 |
| 15:00 | 318 | 473 | 439 | 453 | 451 | 463 | 361 | 456 | 423 |
| 16:00 | 266 | 415 | 462 | 414 | 504 | 461 | 345 | 451 | 410 |
| 17:00 | 230 | 408 | 409 | 436 | 439 | 390 | 227 | 416 | 363 |
| 18:00 | 163 | 276 | 276 | 259 | 314 | 263 | 184 | 278 | 248 |
| 19:00 | 113 | 148 | 155 | 139 | 185 | 167 | 127 | 159 | 148 |
| 20:00 | 93 | 101 | 93 | 156 | 109 | 106 | 80 | 113 | 105 |
| 21:00 | 58 | 66 | 78 | 75 | 59 | 89 | 66 | 73 | 70 |
| 22:00 | 31 | 43 | 45 | 43 | 59 | 71 | 46 | 52 | 48 |
| 23:00 | 27 | 15 | 13 | 21 | 20 | 48 | 28 | 23 | 25 |
| Total | | | | | | | | | |
| 12H(7-19) | 2925 | 4548 | 4586 | 4605 | 4716 | 4740 | 3810 | 4639 | 4276 |
| 16H(6-22) | 3238 | 5061 | 5112 | 5188 | 5279 | 5303 | 4129 | 5189 | 4759 |
| 18H(6-24) | 3296 | 5119 | 5170 | 5252 | 5358 | 5422 | 4203 | 5264 | 4831 |
| 24H(0-24) | 3388 | 5347 | 5398 | 5472 | 5556 | 5640 | 4317 | 5483 | 5017 |
| AM Peak | 11:00 327 | 08:00 434 | 08:00 439 | 08:00 431 | 08:00 444 | 08:00 428 | 11:00 435 | 08:00 435 | 11:00 367 |
| PM Peak | 13:00 371 | 15:00 473 | 16:00 462 | 15:00 453 | 16:00 504 | 15:00 463 | 13:00 429 | 15:00 456 | 15:00 423 |

Scunthorpe ATC, A18

Direction: Eastbound

| Hour Beginning | Sun May 09 | Mon May 10 | Tue May 11 | Wed May 12 | Thu May 13 | Fri May 14 | Sat May 15 | 5-Day Ave. | 7-Day Ave. |
|----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 00:00 | 23 | 11 | 11 | 13 | 16 | 18 | 35 | 14 | 18 |
| 01:00 | 10 | 10 | 14 | 24 | 12 | 9 | 17 | 14 | 14 |
| 02:00 | 12 | 8 | 13 | 11 | 18 | 17 | 22 | 13 | 14 |
| 03:00 | 10 | 15 | 12 | 8 | 15 | 12 | 6 | 12 | 11 |
| 04:00 | 3 | 21 | 23 | 26 | 24 | 27 | 16 | 24 | 20 |
| 05:00 | 14 | 71 | 79 | 66 | 57 | 63 | 72 | 67 | 60 |
| 06:00 | 34 | 125 | 145 | 147 | 133 | 151 | 81 | 140 | 117 |
| 07:00 | 53 | 306 | 305 | 319 | 324 | 301 | 126 | 311 | 248 |
| 08:00 | 80 | 435 | 449 | 483 | 423 | 433 | 209 | 445 | 359 |
| 09:00 | 161 | 336 | 296 | 374 | 388 | 376 | 295 | 354 | 318 |
| 10:00 | 276 | 321 | 414 | 400 | 406 | 414 | 397 | 391 | 375 |
| 11:00 | 375 | 380 | 363 | 384 | 397 | 423 | 468 | 389 | 399 |
| 12:00 | 375 | 380 | 387 | 388 | 420 | 483 | 485 | 412 | 417 |
| 13:00 | 360 | 358 | 415 | 410 | 418 | 463 | 501 | 413 | 418 |
| 14:00 | 352 | 407 | 416 | 398 | 413 | 523 | 459 | 431 | 424 |
| 15:00 | 282 | 432 | 467 | 402 | 480 | 581 | 397 | 472 | 434 |
| 16:00 | 260 | 490 | 468 | 511 | 502 | 549 | 395 | 504 | 454 |
| 17:00 | 206 | 472 | 492 | 445 | 531 | 513 | 308 | 491 | 424 |
| 18:00 | 166 | 340 | 336 | 326 | 337 | 343 | 216 | 336 | 295 |
| 19:00 | 117 | 173 | 174 | 201 | 238 | 215 | 168 | 200 | 184 |
| 20:00 | 93 | 115 | 130 | 134 | 172 | 147 | 98 | 140 | 127 |
| 21:00 | 58 | 68 | 95 | 79 | 72 | 97 | 89 | 82 | 80 |
| 22:00 | 42 | 35 | 47 | 49 | 66 | 64 | 62 | 52 | 52 |
| 23:00 | 27 | 7 | 28 | 21 | 34 | 36 | 35 | 25 | 27 |
| Total | | | | | | | | | |
| 12H(7-19) | 2946 | 4657 | 4808 | 4840 | 5039 | 5402 | 4256 | 4949 | 4564 |
| 16H(6-22) | 3248 | 5138 | 5352 | 5401 | 5654 | 6012 | 4692 | 5511 | 5071 |
| 18H(6-24) | 3317 | 5180 | 5427 | 5471 | 5754 | 6112 | 4789 | 5589 | 5150 |
| 24H(0-24) | 3389 | 5316 | 5579 | 5619 | 5896 | 6258 | 4957 | 5734 | 5288 |
| AM Peak | 11:00 375 | 08:00 435 | 08:00 449 | 08:00 483 | 08:00 423 | 08:00 433 | 11:00 468 | 08:00 445 | 11:00 399 |
| PM Peak | 12:00 375 | 16:00 490 | 17:00 492 | 16:00 511 | 17:00 531 | 15:00 581 | 13:00 501 | 16:00 504 | 16:00 454 |

Scunthorpe ATC, A18



Direction: Total Flow

| Hour Beginning | Sun May 09 | Mon May 10 | Tue May 11 | Wed May 12 | Thu May 13 | Fri May 14 | Sat May 15 | 5-Day Ave. | 7-Day Ave. |
|----------------|---------------------|---------------------|---------------------|---------------------|----------------------|----------------------|---------------------|---------------------|---------------------|
| 00:00 | 36 | 21 | 25 | 25 | 33 | 35 | 51 | 28 | 32 |
| 01:00 | 21 | 20 | 26 | 40 | 21 | 20 | 31 | 25 | 26 |
| 02:00 | 19 | 24 | 23 | 21 | 26 | 26 | 30 | 24 | 24 |
| 03:00 | 19 | 33 | 24 | 19 | 37 | 30 | 16 | 29 | 25 |
| 04:00 | 14 | 69 | 69 | 72 | 60 | 68 | 35 | 68 | 55 |
| 05:00 | 55 | 197 | 213 | 191 | 163 | 185 | 119 | 190 | 160 |
| 06:00 | 83 | 323 | 345 | 360 | 343 | 352 | 127 | 345 | 276 |
| 07:00 | 121 | 679 | 674 | 701 | 681 | 625 | 240 | 672 | 532 |
| 08:00 | 172 | 869 | 888 | 914 | 867 | 861 | 423 | 880 | 713 |
| 09:00 | 366 | 708 | 649 | 755 | 728 | 781 | 583 | 724 | 653 |
| 10:00 | 543 | 650 | 727 | 763 | 698 | 778 | 795 | 723 | 708 |
| 11:00 | 702 | 726 | 692 | 748 | 770 | 819 | 903 | 751 | 766 |
| 12:00 | 688 | 746 | 741 | 787 | 769 | 909 | 888 | 790 | 790 |
| 13:00 | 731 | 738 | 811 | 747 | 846 | 859 | 930 | 800 | 809 |
| 14:00 | 657 | 783 | 863 | 784 | 838 | 947 | 871 | 843 | 820 |
| 15:00 | 600 | 905 | 906 | 855 | 931 | 1044 | 758 | 928 | 857 |
| 16:00 | 526 | 905 | 930 | 925 | 1006 | 1010 | 740 | 955 | 863 |
| 17:00 | 436 | 880 | 901 | 881 | 970 | 903 | 535 | 907 | 787 |
| 18:00 | 329 | 616 | 612 | 585 | 651 | 606 | 400 | 614 | 543 |
| 19:00 | 230 | 321 | 329 | 340 | 423 | 382 | 295 | 359 | 331 |
| 20:00 | 186 | 216 | 223 | 290 | 281 | 253 | 178 | 253 | 232 |
| 21:00 | 116 | 134 | 173 | 154 | 131 | 186 | 155 | 156 | 150 |
| 22:00 | 73 | 78 | 92 | 92 | 125 | 135 | 108 | 104 | 100 |
| 23:00 | 54 | 22 | 41 | 42 | 54 | 84 | 63 | 49 | 51 |
| Total | | | | | | | | | |
| 12H(7-19) | 5871 | 9205 | 9394 | 9445 | 9755 | 10142 | 8066 | 9588 | 8840 |
| 16H(6-22) | 6486 | 10199 | 10464 | 10589 | 10933 | 11315 | 8821 | 10700 | 9830 |
| 18H(6-24) | 6613 | 10299 | 10597 | 10723 | 11112 | 11534 | 8992 | 10853 | 9981 |
| 24H(0-24) | 6777 | 10663 | 10977 | 11091 | 11452 | 11898 | 9274 | 11216 | 10305 |
| AM Peak | 11:00 702 | 08:00 869 | 08:00 888 | 08:00 914 | 08:00 867 | 08:00 861 | 11:00 903 | 08:00 880 | 11:00 766 |
| PM Peak | 13:00 731 | 15:00 905 | 16:00 930 | 16:00 925 | 16:00 1006 | 15:00 1044 | 13:00 930 | 16:00 955 | 16:00 863 |

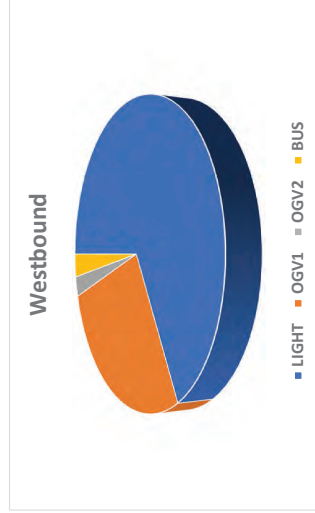
Scunthorpe ATC, A18

Direction: Westbound

| | Total Volume | LIGHT | OGV1 | OGV2 | BUS |
|------------|--------------|-------|------|------|-----|
| Sun 9 May | 3388 | 2962 | 400 | 12 | 14 |
| Mon 10 May | 5347 | 3265 | 1736 | 150 | 196 |
| Tue 11 May | 5398 | 3276 | 1788 | 162 | 172 |
| Wed 12 May | 5472 | 3297 | 1823 | 167 | 185 |
| Thu 13 May | 5556 | 3345 | 1864 | 159 | 188 |
| Fri 14 May | 5640 | 3378 | 1905 | 161 | 196 |
| Sat 15 May | 4317 | 3782 | 501 | 16 | 18 |
| 5 Day Ave. | 5483 | 3312 | 1823 | 160 | 187 |
| 7 Day Ave. | 5017 | 3329 | 1431 | 118 | 138 |

| | Total Volume | LIGHT | OGV1 | OGV2 | BUS |
|------------|--------------|-------|-------|------|------|
| Sun 9 May | 100.0% | 87.4% | 11.8% | 0.4% | 0.4% |
| Mon 10 May | 100.0% | 61.1% | 32.5% | 2.8% | 3.7% |
| Tue 11 May | 100.0% | 60.7% | 33.1% | 3.0% | 3.2% |
| Wed 12 May | 100.0% | 60.3% | 33.3% | 3.1% | 3.4% |
| Thu 13 May | 100.0% | 60.2% | 33.5% | 2.9% | 3.4% |
| Fri 14 May | 100.0% | 59.9% | 33.8% | 2.9% | 3.5% |
| Sat 15 May | 100.0% | 87.6% | 11.6% | 0.4% | 0.4% |
| 5 Day Ave. | 100.0% | 60.4% | 33.3% | 2.9% | 3.4% |
| 7 Day Ave. | 100.0% | 66.4% | 28.5% | 2.4% | 2.8% |

360 TSL Ltd

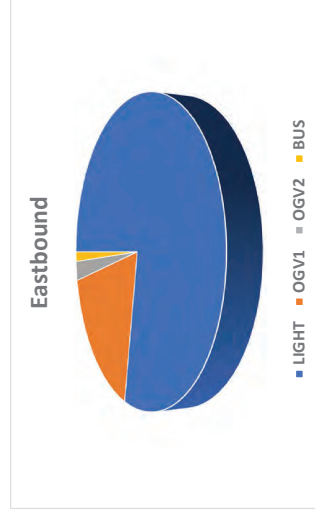


Direction: Eastbound

| | Total Volume | LIGHT | OGV1 | OGV2 | BUS |
|------------|--------------|-------|------|------|-----|
| Sun 9 May | 3389 | 3085 | 280 | 17 | 7 |
| Mon 10 May | 5316 | 3957 | 1138 | 140 | 81 |
| Tue 11 May | 5579 | 4148 | 1205 | 156 | 70 |
| Wed 12 May | 5619 | 4165 | 1208 | 160 | 86 |
| Thu 13 May | 5896 | 4328 | 1302 | 170 | 96 |
| Fri 14 May | 6258 | 4655 | 1350 | 174 | 79 |
| Sat 15 May | 4957 | 4488 | 428 | 28 | 13 |
| 5 Day Ave. | 5734 | 4251 | 1241 | 160 | 82 |
| 7 Day Ave. | 5288 | 4118 | 987 | 121 | 62 |

| | Total Volume | LIGHT | OGV1 | OGV2 | BUS |
|------------|--------------|-------|-------|------|------|
| Sun 9 May | 100.0% | 91.0% | 8.3% | 0.5% | 0.2% |
| Mon 10 May | 100.0% | 74.4% | 21.4% | 2.6% | 1.5% |
| Tue 11 May | 100.0% | 74.4% | 21.6% | 2.8% | 1.3% |
| Wed 12 May | 100.0% | 74.1% | 21.5% | 2.8% | 1.5% |
| Thu 13 May | 100.0% | 73.4% | 22.1% | 2.9% | 1.6% |
| Fri 14 May | 100.0% | 74.4% | 21.6% | 2.8% | 1.3% |
| Sat 15 May | 100.0% | 90.5% | 8.6% | 0.6% | 0.3% |
| 5 Day Ave. | 100.0% | 74.1% | 21.6% | 2.8% | 1.4% |
| 7 Day Ave. | 100.0% | 77.9% | 18.7% | 2.3% | 1.2% |

360 TSL Ltd

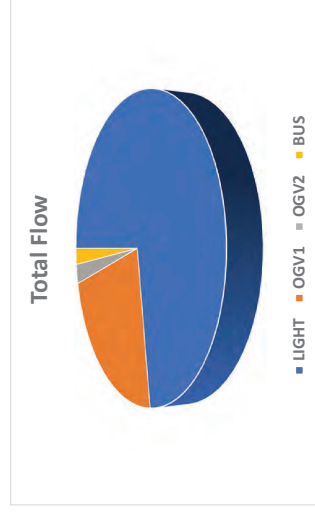


Direction: Total Flow

| | Total Volume | LIGHT | OGV1 | OGV2 | BUS |
|------------|--------------|-------|------|------|-----|
| Sun 9 May | 6777 | 6047 | 680 | 29 | 21 |
| Mon 10 May | 10663 | 7222 | 2874 | 290 | 277 |
| Tue 11 May | 10977 | 7424 | 2993 | 318 | 242 |
| Wed 12 May | 11091 | 7462 | 3031 | 327 | 271 |
| Thu 13 May | 11452 | 7673 | 3166 | 329 | 284 |
| Fri 14 May | 11898 | 8033 | 3255 | 335 | 275 |
| Sat 15 May | 9274 | 8270 | 929 | 44 | 31 |
| 5 Day Ave. | 11216 | 7563 | 3064 | 320 | 270 |
| 7 Day Ave. | 10305 | 7447 | 2418 | 239 | 200 |

| | Total Volume | LIGHT | OGV1 | OGV2 | BUS |
|------------|--------------|-------|-------|------|------|
| Sun 9 May | 100.0% | 89.2% | 10.0% | 0.4% | 0.3% |
| Mon 10 May | 100.0% | 67.7% | 27.0% | 2.7% | 2.6% |
| Tue 11 May | 100.0% | 67.6% | 27.3% | 2.9% | 2.2% |
| Wed 12 May | 100.0% | 67.3% | 27.3% | 2.9% | 2.4% |
| Thu 13 May | 100.0% | 67.0% | 27.6% | 2.9% | 2.5% |
| Fri 14 May | 100.0% | 67.5% | 27.4% | 2.8% | 2.3% |
| Sat 15 May | 100.0% | 89.2% | 10.0% | 0.5% | 0.3% |
| 5 Day Ave. | 100.0% | 67.4% | 27.3% | 2.9% | 2.4% |
| 7 Day Ave. | 100.0% | 72.3% | 23.5% | 2.3% | 1.9% |

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Scunthorpe ATC, B1208

Direction: Southbound

| Hour Beginning | Sun May 09 | Mon May 10 | Tue May 11 | Wed May 12 | Thu May 13 | Fri May 14 | Sat May 15 | 5-Day Ave. | 7-Day Ave. |
|----------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 00:00 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 01:00 | 1 | 0 | 1 | 2 | 1 | 1 | 2 | 1 | 1 |
| 02:00 | 0 | 1 | 1 | 2 | 1 | 0 | 1 | 1 | 1 |
| 03:00 | 0 | 1 | 1 | 0 | 1 | 2 | 0 | 1 | 1 |
| 04:00 | 0 | 1 | 0 | 4 | 2 | 3 | 0 | 2 | 1 |
| 05:00 | 2 | 5 | 7 | 3 | 4 | 6 | 6 | 5 | 5 |
| 06:00 | 2 | 18 | 18 | 11 | 18 | 15 | 9 | 16 | 13 |
| 07:00 | 8 | 43 | 44 | 47 | 33 | 39 | 12 | 41 | 32 |
| 08:00 | 7 | 63 | 55 | 62 | 63 | 57 | 19 | 60 | 47 |
| 09:00 | 20 | 45 | 46 | 46 | 51 | 50 | 39 | 48 | 42 |
| 10:00 | 34 | 40 | 40 | 45 | 44 | 56 | 43 | 45 | 43 |
| 11:00 | 48 | 37 | 43 | 40 | 51 | 55 | 55 | 45 | 47 |
| 12:00 | 46 | 45 | 48 | 44 | 64 | 50 | 49 | 50 | 49 |
| 13:00 | 36 | 43 | 56 | 56 | 63 | 62 | 50 | 56 | 52 |
| 14:00 | 45 | 75 | 66 | 65 | 68 | 84 | 45 | 72 | 64 |
| 15:00 | 33 | 75 | 68 | 52 | 74 | 82 | 48 | 70 | 62 |
| 16:00 | 23 | 62 | 62 | 66 | 74 | 80 | 26 | 69 | 56 |
| 17:00 | 22 | 40 | 47 | 61 | 65 | 52 | 20 | 53 | 44 |
| 18:00 | 15 | 32 | 20 | 30 | 42 | 26 | 17 | 30 | 26 |
| 19:00 | 12 | 15 | 15 | 16 | 23 | 17 | 11 | 17 | 16 |
| 20:00 | 9 | 7 | 17 | 11 | 18 | 10 | 16 | 13 | 13 |
| 21:00 | 7 | 7 | 6 | 5 | 11 | 6 | 8 | 7 | 7 |
| 22:00 | 2 | 2 | 3 | 4 | 3 | 1 | 4 | 3 | 3 |
| 23:00 | 3 | 2 | 1 | 2 | 2 | 5 | 4 | 2 | 3 |
| Total | | | | | | | | | |
| 12H(7-19) | 337 | 600 | 595 | 614 | 692 | 693 | 423 | 639 | 565 |
| 16H(6-22) | 367 | 647 | 651 | 657 | 762 | 741 | 467 | 692 | 613 |
| 18H(6-24) | 372 | 651 | 655 | 663 | 767 | 747 | 475 | 697 | 619 |
| 24H(0-24) | 376 | 659 | 665 | 675 | 777 | 759 | 484 | 707 | 628 |
| AM Peak | 11:00 48 | 08:00 63 | 08:00 55 | 08:00 62 | 08:00 63 | 08:00 57 | 11:00 55 | 08:00 60 | 11:00 47 |
| PM Peak | 12:00 46 | 14:00 75 | 15:00 68 | 16:00 66 | 15:00 74 | 14:00 84 | 13:00 50 | 14:00 72 | 14:00 64 |

Scunthorpe ATC, B1208

Direction: Northbound

| Hour Beginning | Sun May 09 | Mon May 10 | Tue May 11 | Wed May 12 | Thu May 13 | Fri May 14 | Sat May 15 | 5-Day Ave. | 7-Day Ave. |
|----------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 00:00 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 1 | 1 |
| 01:00 | 3 | 0 | 1 | 0 | 1 | 1 | 2 | 1 | 1 |
| 02:00 | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| 03:00 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| 04:00 | 1 | 8 | 3 | 6 | 5 | 1 | 3 | 5 | 4 |
| 05:00 | 3 | 7 | 7 | 9 | 10 | 14 | 9 | 9 | 8 |
| 06:00 | 5 | 20 | 18 | 14 | 14 | 15 | 6 | 16 | 13 |
| 07:00 | 4 | 48 | 49 | 48 | 45 | 44 | 12 | 47 | 36 |
| 08:00 | 12 | 50 | 53 | 68 | 56 | 61 | 22 | 58 | 46 |
| 09:00 | 26 | 51 | 41 | 51 | 59 | 42 | 26 | 49 | 42 |
| 10:00 | 27 | 43 | 38 | 36 | 50 | 54 | 41 | 44 | 41 |
| 11:00 | 34 | 47 | 40 | 54 | 53 | 49 | 47 | 49 | 46 |
| 12:00 | 45 | 52 | 40 | 50 | 55 | 64 | 53 | 52 | 51 |
| 13:00 | 37 | 42 | 45 | 51 | 57 | 52 | 40 | 49 | 46 |
| 14:00 | 53 | 52 | 39 | 48 | 47 | 59 | 54 | 49 | 50 |
| 15:00 | 46 | 70 | 76 | 69 | 94 | 85 | 39 | 79 | 68 |
| 16:00 | 28 | 57 | 64 | 55 | 69 | 58 | 51 | 61 | 55 |
| 17:00 | 25 | 55 | 68 | 62 | 54 | 58 | 38 | 59 | 51 |
| 18:00 | 22 | 34 | 25 | 33 | 29 | 39 | 27 | 32 | 30 |
| 19:00 | 20 | 24 | 22 | 17 | 22 | 26 | 16 | 22 | 21 |
| 20:00 | 6 | 14 | 17 | 10 | 20 | 16 | 8 | 15 | 13 |
| 21:00 | 4 | 7 | 6 | 11 | 15 | 7 | 8 | 9 | 8 |
| 22:00 | 1 | 2 | 2 | 2 | 4 | 4 | 3 | 3 | 3 |
| 23:00 | 0 | 3 | 0 | 1 | 1 | 3 | 1 | 2 | 1 |
| Total | | | | | | | | | |
| 12H(7-19) | 359 | 601 | 578 | 625 | 668 | 665 | 450 | 627 | 564 |
| 16H(6-22) | 394 | 666 | 641 | 677 | 739 | 729 | 488 | 690 | 619 |
| 18H(6-24) | 395 | 671 | 643 | 680 | 744 | 736 | 492 | 695 | 623 |
| 24H(0-24) | 403 | 689 | 655 | 696 | 764 | 754 | 509 | 712 | 639 |
| AM Peak | 11:00 34 | 09:00 51 | 08:00 53 | 08:00 68 | 09:00 59 | 08:00 61 | 11:00 47 | 08:00 58 | 11:00 46 |
| PM Peak | 14:00 53 | 15:00 70 | 15:00 76 | 15:00 69 | 15:00 94 | 15:00 85 | 14:00 54 | 15:00 79 | 15:00 68 |

Scunthorpe ATC, B1208



Direction: Total Flow

| Hour Beginning | Sun May 09 | Mon May 10 | Tue May 11 | Wed May 12 | Thu May 13 | Fri May 14 | Sat May 15 | 5-Day Ave. | 7-Day Ave. |
|----------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 00:00 | 1 | 0 | 0 | 1 | 3 | 1 | 2 | 1 | 1 |
| 01:00 | 4 | 0 | 2 | 2 | 2 | 2 | 4 | 2 | 2 |
| 02:00 | 1 | 3 | 2 | 3 | 2 | 1 | 1 | 2 | 2 |
| 03:00 | 0 | 2 | 1 | 0 | 2 | 2 | 1 | 1 | 1 |
| 04:00 | 1 | 9 | 3 | 10 | 7 | 4 | 3 | 7 | 5 |
| 05:00 | 5 | 12 | 14 | 12 | 14 | 20 | 15 | 14 | 13 |
| 06:00 | 7 | 38 | 36 | 25 | 32 | 30 | 15 | 32 | 26 |
| 07:00 | 12 | 91 | 93 | 95 | 78 | 83 | 24 | 88 | 68 |
| 08:00 | 19 | 113 | 108 | 130 | 119 | 118 | 41 | 118 | 93 |
| 09:00 | 46 | 96 | 87 | 97 | 110 | 92 | 65 | 96 | 85 |
| 10:00 | 61 | 83 | 78 | 81 | 94 | 110 | 84 | 89 | 84 |
| 11:00 | 82 | 84 | 83 | 94 | 104 | 104 | 102 | 94 | 93 |
| 12:00 | 91 | 97 | 88 | 94 | 119 | 114 | 102 | 102 | 101 |
| 13:00 | 73 | 85 | 101 | 107 | 120 | 114 | 90 | 105 | 99 |
| 14:00 | 98 | 127 | 105 | 113 | 115 | 143 | 99 | 121 | 114 |
| 15:00 | 79 | 145 | 144 | 121 | 168 | 167 | 87 | 149 | 130 |
| 16:00 | 51 | 119 | 126 | 121 | 143 | 138 | 77 | 129 | 111 |
| 17:00 | 47 | 95 | 115 | 123 | 119 | 110 | 58 | 112 | 95 |
| 18:00 | 37 | 66 | 45 | 63 | 71 | 65 | 44 | 62 | 56 |
| 19:00 | 32 | 39 | 37 | 33 | 45 | 43 | 27 | 39 | 37 |
| 20:00 | 15 | 21 | 34 | 21 | 38 | 26 | 24 | 28 | 26 |
| 21:00 | 11 | 14 | 12 | 16 | 26 | 13 | 16 | 16 | 15 |
| 22:00 | 3 | 4 | 5 | 6 | 7 | 5 | 7 | 5 | 5 |
| 23:00 | 3 | 5 | 1 | 3 | 3 | 8 | 5 | 4 | 4 |
| Total | | | | | | | | | |
| 12H(7-19) | 696 | 1201 | 1173 | 1239 | 1360 | 1358 | 873 | 1266 | 1129 |
| 16H(6-22) | 761 | 1313 | 1292 | 1334 | 1501 | 1470 | 955 | 1382 | 1232 |
| 18H(6-24) | 767 | 1322 | 1298 | 1343 | 1511 | 1483 | 967 | 1391 | 1242 |
| 24H(0-24) | 779 | 1348 | 1320 | 1371 | 1541 | 1513 | 993 | 1419 | 1266 |
| AM Peak | 11:00 82 | 08:00 113 | 08:00 108 | 08:00 130 | 08:00 119 | 08:00 118 | 11:00 102 | 08:00 118 | 11:00 93 |
| PM Peak | 14:00 98 | 15:00 145 | 15:00 144 | 17:00 123 | 15:00 168 | 15:00 167 | 12:00 102 | 15:00 149 | 15:00 130 |

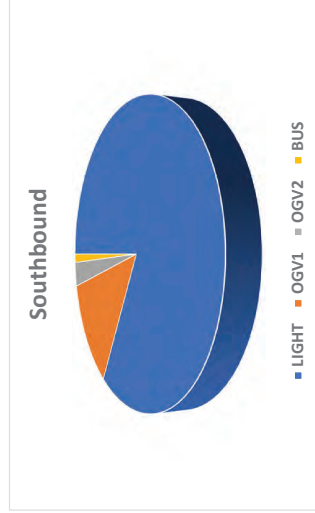
Scunthorpe ATC, B1208

Direction: Southbound

| | Total Volume | LIGHT | OGV1 | OGV2 | BUS |
|------------|--------------|-------|------|------|-----|
| Sun 9 May | 376 | 345 | 30 | 1 | 0 |
| Mon 10 May | 659 | 541 | 89 | 23 | 6 |
| Tue 11 May | 665 | 551 | 94 | 14 | 6 |
| Wed 12 May | 675 | 539 | 102 | 21 | 13 |
| Thu 13 May | 777 | 628 | 110 | 27 | 12 |
| Fri 14 May | 759 | 619 | 101 | 32 | 7 |
| Sat 15 May | 484 | 436 | 40 | 7 | 1 |
| 5 Day Ave. | 707 | 576 | 99 | 23 | 9 |
| 7 Day Ave. | 628 | 523 | 81 | 18 | 6 |

| | Total Volume | LIGHT | OGV1 | OGV2 | BUS |
|------------|--------------|-------|-------|------|------|
| Sun 9 May | 100.0% | 91.8% | 8.0% | 0.3% | 0.0% |
| Mon 10 May | 100.0% | 82.1% | 13.5% | 3.5% | 0.9% |
| Tue 11 May | 100.0% | 82.9% | 14.1% | 2.1% | 0.9% |
| Wed 12 May | 100.0% | 79.9% | 15.1% | 3.1% | 1.9% |
| Thu 13 May | 100.0% | 80.8% | 14.2% | 3.5% | 1.5% |
| Fri 14 May | 100.0% | 81.6% | 13.3% | 4.2% | 0.9% |
| Sat 15 May | 100.0% | 90.1% | 8.3% | 1.4% | 0.2% |
| 5 Day Ave. | 100.0% | 81.4% | 14.0% | 3.3% | 1.2% |
| 7 Day Ave. | 100.0% | 83.3% | 12.9% | 2.8% | 1.0% |

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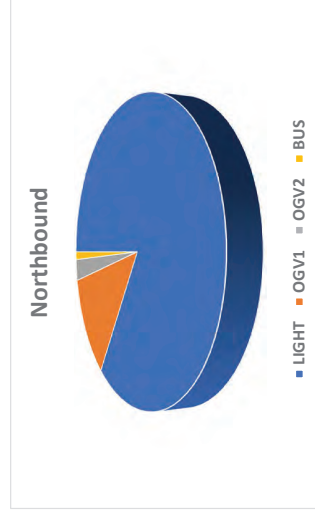


Direction: Northbound

| | Total Volume | LIGHT | OGV1 | OGV2 | BUS |
|------------|--------------|-------|------|------|-----|
| Sun 9 May | 403 | 370 | 31 | 2 | 0 |
| Mon 10 May | 689 | 567 | 92 | 22 | 8 |
| Tue 11 May | 655 | 544 | 87 | 15 | 9 |
| Wed 12 May | 696 | 583 | 90 | 14 | 9 |
| Thu 13 May | 764 | 619 | 107 | 30 | 8 |
| Fri 14 May | 754 | 629 | 93 | 25 | 7 |
| Sat 15 May | 509 | 458 | 46 | 4 | 1 |
| 5 Day Ave. | 712 | 588 | 94 | 21 | 8 |
| 7 Day Ave. | 639 | 539 | 78 | 16 | 6 |

| | Total Volume | LIGHT | OGV1 | OGV2 | BUS |
|------------|--------------|-------|-------|------|------|
| Sun 9 May | 100.0% | 91.8% | 7.7% | 0.5% | 0.0% |
| Mon 10 May | 100.0% | 82.3% | 13.4% | 3.2% | 1.2% |
| Tue 11 May | 100.0% | 83.1% | 13.3% | 2.3% | 1.4% |
| Wed 12 May | 100.0% | 83.8% | 12.9% | 2.0% | 1.3% |
| Thu 13 May | 100.0% | 81.0% | 14.0% | 3.9% | 1.0% |
| Fri 14 May | 100.0% | 83.4% | 12.3% | 3.3% | 0.9% |
| Sat 15 May | 100.0% | 90.0% | 9.0% | 0.8% | 0.2% |
| 5 Day Ave. | 100.0% | 82.7% | 13.2% | 3.0% | 1.2% |
| 7 Day Ave. | 100.0% | 84.3% | 12.2% | 2.5% | 0.9% |

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Direction: Total Flow

| | Total Volume | LIGHT | OGV1 | OGV2 | BUS |
|------------|--------------|-------|------|------|-----|
| Sun 9 May | 779 | 715 | 61 | 3 | 0 |
| Mon 10 May | 1348 | 1108 | 181 | 45 | 14 |
| Tue 11 May | 1320 | 1095 | 181 | 29 | 15 |
| Wed 12 May | 1371 | 1122 | 192 | 35 | 22 |
| Thu 13 May | 1541 | 1247 | 217 | 57 | 20 |
| Fri 14 May | 1513 | 1248 | 194 | 57 | 14 |
| Sat 15 May | 993 | 894 | 86 | 11 | 2 |
| 5 Day Ave. | 1419 | 1164 | 193 | 45 | 17 |
| 7 Day Ave. | 1266 | 1061 | 159 | 34 | 12 |

| | Total Volume | LIGHT | OGV1 | OGV2 | BUS |
|------------|--------------|-------|-------|------|------|
| Sun 9 May | 100.0% | 91.8% | 7.8% | 0.4% | 0.0% |
| Mon 10 May | 100.0% | 82.2% | 13.4% | 3.3% | 1.0% |
| Tue 11 May | 100.0% | 83.0% | 13.7% | 2.2% | 1.1% |
| Wed 12 May | 100.0% | 81.8% | 14.0% | 2.6% | 1.6% |
| Thu 13 May | 100.0% | 80.9% | 14.1% | 3.7% | 1.3% |
| Fri 14 May | 100.0% | 82.5% | 12.8% | 3.8% | 0.9% |
| Sat 15 May | 100.0% | 90.0% | 8.7% | 1.1% | 0.2% |
| 5 Day Ave. | 100.0% | 82.1% | 13.6% | 3.1% | 1.2% |
| 7 Day Ave. | 100.0% | 83.8% | 12.5% | 2.7% | 1.0% |

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