



Historic England

**PLANNING ACT 2008 (AS AMENDED) – SECTION 89 AND THE  
INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES 2010 (AS  
AMENDED) - RULE 8**

**APPLICATION BY ORSTED HORNSEA PROJECT THREE (UK) LTD FOR AN  
ORDER GRANTING DEVELOPMENT CONSENT FOR THE PROPOSED HORNSEA  
PROJECT THREE OFFSHORE WIND FARM**

**APPLICATION REF: EN010080**

**REPRESENTATIONS OF THE HISTORIC BUILDINGS AND MONUMENTS  
COMMISSION FOR ENGLAND (HISTORIC ENGLAND)**

**REGISTRATION ID No. 20010680**

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## Summary

Historic England's written representation considers in more detail concerns we have already raised in relation to the impact of the Mangreen substation on the significance of a number of highly designated heritage assets through development within their setting. In particular these are the Grade II\* listed buildings located closest to the substation of Gowthorpe Manor House and Barn, and Mangreen Hall, and the Grade II\* registered park and garden and Grade II\* listed church at Intwood. We have also raised concerns about the impact upon the Grade II listed Keswick Hall.

In coming to this view we have taken into consideration specific historic environment visualisations chapter and the Historic Environment Chapter of the Environmental Statement. We have also put this position in relation to Planning Policy, and we recommend that in determining the application the examining authority should take into consideration the significance of the heritage assets and weigh the harm which would be caused to their significance against the public benefits of the proposed development. Consideration should be given as to whether the applicant has taken all possible steps to avoid the harm, or if this is not deemed possible by the examining authority, to minimise the harm the development would cause.

We have also made specific comments on these chapters of the ES:

- Volume 3, Chapter 5 – Historic Environment and Environmental Statement
- Volume 3, Chapter 5: Annex 5.7: Historic Environment Visualisations
- Outline Onshore Written Scheme of Investigation (dated July 2018 but not provided in the ES)
- Chapter 3 – Project Description – PINS Document Reference A6.1.3 APFP Regulations 5(2)(a):
- Volume 2, Chapter 9 – Marine Archaeology – PINS Document Reference: A6.2.9 APFP Regulation 5(2)(a) (dated May 2018), prepared by RPS on behalf of Ørsted Power (UK) Ltd:
- Volume 5, Annex 9.1 – Marine Archaeology Technical Report PINS Document Reference: A6.5.9.1 APFP Regulation 5(2)(a):
- Draft Development Consent Order including Draft Deemed Marine Licences PINS Document Reference: A3.1 Regulation 5(2)(b):
- Volume 5, Annex 9.2 – Outline Offshore Written Scheme of Investigation PINS Document Reference: A.6.5.9.2 APFP Regulation 5(2)(a):

These comments are in part to ensure the Offshore WSI would be fit to enable the implementation of appropriate mitigation measures to avoid and reduce the impact from the development on the offshore historic environment, and develop appropriate methodologies for further investigations within the project area, prior to the commencement of construction activities.



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## 1. Introduction

- 1.1. The Historic Buildings and Monuments Commission for England (HBMCE), known as Historic England, are the Government's adviser on all aspects of the historic environment in England - including historic buildings and areas, archaeology and historic landscape – and have a duty to promote public understanding and enjoyment. HBMCE are an executive Non-Departmental Public body sponsored by the Department for Digital Culture, Media and Sport (DCMS) and we answer to Parliament through the Secretary of State for Digital Culture, Media and Sport. Our remit in conservation matters intersects with the policy responsibilities of a number of other government departments – particularly the Ministry of Housing, Communities and Local Government, with their responsibilities for land use planning matters. The National Heritage Act (2002) gave HBMCE responsibility for maritime archaeology in the English area of the UK Territorial Sea.
- 1.2. In previous correspondence in relation to this project and in our Section 56 Representation (dated 22<sup>nd</sup> July 2018) we noted that the applicants had provided a comprehensive Environmental Statement, however we identified that this development had the potential to impact upon the historic environment, and that this impact would be significant in relation to a number of heritage receptors and in relation to EIA policy. We also stated that a number of specific points would be addressed in our full Written Representation in relation to the on- and off-shore sections of the Environmental Statement. This letter will therefore provide that additional detail in relation to the impact of the proposed HVDC Converter/HVAC substation at Mangreen on the significance of a number of designated heritage assets through development within their setting. In particular, the three Grade II\* listed buildings located close to the substation (Mangreen Hall, Gowthorpe Manor House and Barn), and the grade II\* registered park and garden and Grade II\* listed church at Intwood Hall. We have previously noted the potential impact upon a number of Grade II listed buildings (e.g. Keswick Hall) and the local Conservation Areas which lie to the north of the development; however these are primarily issues for the Local Planning Authority and their Conservation Officers and other specialist advisors and will not be addressed further in this representation.
- 1.3. As set out in our s.56 representation, this letter will also address matters relating to the outline onshore Written Scheme of Investigations (WSI), the outline offshore WSI and other matters relating to the marine historic environment as set out in the following documents and chapters:



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- Environmental Statement: Volume 3, Chapter 5 – Historic Environment and Environmental Statement: Volume 3, Chapter 5: Annex 5.7: Historic Environment Visualisations
- Outline Onshore Written Scheme of Investigation(dated July 2018 but not provided in the ES)
- Environmental Statement: Chapter 3 – Project Description – PINS Document Reference A6.1.3 APFP Regulations 5(2)(a):
- Environmental Statement: Volume 2, Chapter 9 – Marine Archaeology – PINS Document Reference: A6.2.9 APFP Regulation 5(2)(a) (dated May 2018), prepared by RPS on behalf of Ørsted Power (UK) Ltd:
- Environmental Statement: Volume 5, Annex 9.1 – Marine Archaeology Technical Report PINS Document Reference: A6.5.9.1 APFP Regulation 5(2)(a):
- Draft Development Consent Order including Draft Deemed Marine Licences PINS Document Reference: A3.1 Regulation 5(2)(b):
- Environmental Statement: Volume 5, Annex 9.2 – Outline Offshore Written Scheme of Investigation PINS Document Reference: A.6.5.9.2 APFP Regulation 5(2)(a):

1.4. This statement also aims to address the issue raised in the ‘Examining Authority’s Written Questions and Requests for Information’ as issued by the Planning Inspectorate on 09<sup>th</sup> October 2018. Specifically those questions in Section 8 ‘Historic Environment’ Question Reference Q1.8.1 to Q1.8.19

## 2. Comments in relation to Environmental Statement: Volume 3, Chapter 5 – Historic Environment and Environmental Statement: Volume 3, Chapter 5: Annex 5.7: Historic Environment Visualisations

2.1. As discussed above, Historic England’s concerns relate the impact of the proposed HVDC Converter/HVAC substation at Mangreen on the significance of three nearby highly listed heritage assets, Mangreen Hall, Gowthorpe Manor (including the barn) and Intwood Hall (including its registered landscape):

2.2. **Mangreen Hall** is a house with a main façade of c.1700 fronting an earlier core with later additions. The façade combines a handsome classical front with characterful shaped gables, an expressive design reflecting the fashions of the proceeding century. Internally it contains a fine staircase that is contemporary with the facade. The house lies within its grounds which contain various ancillary buildings. The historic farmstead of c.1800 lies on the south side of the lane. This small group sits in an isolated position within the wider rural landscape which (despite the main road to the north) maintains the historic context of the Hall and reflects its function as a country house at the centre of an agricultural



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estate. The landscape also contributes to the aesthetic character of the site. The house is listed grade II\* and the lodge, cottage and farmstead grade II.

- 2.3. The Hall is the closest listed building to the proposed substation which lies to the North West. A viewpoint has been produced from just north of Mangreen Lane (between the Hall and substation) looking towards the substation. The wire lines indicate the substantial scale of the substation development from this location. Although the 'year fifteen' photomontage shows this screened by a hedge, this is presumably because of the location it is taken from on the hedge line itself. The applicants have not provided a view or photomontage from the Hall, from its grounds or from land just to the north. The assessment notes the Hall faces north towards the substation and that historic maps show a tree lined avenue to the north which suggest this land formed part of a formal landscape or approach to the Hall. There are some ancillary buildings and planting around the Hall, which is quite dense to the east and west. However, the scale of the substation means it would be very visible in views from the surrounding landscape and potentially from the Hall and its grounds. Its presence in the landscape would impact on the way in which the Hall is experienced from the west and north and potentially in longer views from the south. The development would erode the rural landscape setting that contributes to the significance of the Hall and would result in a considerable degree of harm.
- 2.4. **Gowthorpe Manor** appears to be the product of several building phases including two in the sixteenth century, the second encasing the earlier timber framed house in brick. It was then subsequently altered in the later seventeenth and early twentieth centuries. The Manor comprises both brick and timber framed ranges and decorative details including stepped gables and tall chimneys. The house and adjacent seventeenth century barn are listed grade II\*; a garden building, barn and walls are listed grade II. There are modern farm buildings to the north of the farmstead. The historic buildings form a handsome group reflecting the status of the building and its owners. They occupy an isolated position in the rural landscape. Like Mangreen Hall this is a country house at the centre of an agricultural estate and the surrounding rural landscape contributes to understanding how the buildings functioned historically and the aesthetic character of the site.
- 2.5. The proposed substation site is to the north of Gowthorpe Manor and a viewpoint has been taken from the grounds to the north. The assessment notes the Hall faces away from the substation and the viewpoint taken from near the modern barns shows the proposed substation screened behind a small area of hedge. We are however aware that there are gaps in the hedge to either side of this location and we believe it is likely that the substation would be visible from the land that surrounds the heritage assets. The development would impact on the



way the manor is experienced, and the erosion of the rural setting would again cause considerable harm to the significance of the listed buildings.

- 2.6. The historic landscape at **Intwood Hall** comprises the gardens and parkland to the country house. The gardens include several walled compartments dating from the mid sixteenth century. The park was laid out in the mid nineteenth century and is roughly fan shaped with the hall and park facing out the south east as the park expands in this direction. The register of historic parks and gardens describes how this looks across a landscape of well wooded farmland and that the Hall, located on the highest ground, enjoys views across the park to the countryside beyond. Although the power lines are visible from this point the landscape is otherwise essentially rural. This wider rural landscape was intended to contribute to the enjoyment of the park and the rural landscape illustrates the function of Intwood as a country house. It is listed grade II\* and a number of the ancillary structures are listed grade II. The medieval church which was heavily restored in the nineteenth century lies on the north eastern edge of the park and is also grade II\*.
- 2.7. The proposed substation site lies to the east of Intwood, the direction that is overlooked by the hall and park. A visualisation has been produced from Intwood Lane which cuts through the park, just to the south of the church. There are two small areas of woodland between the Intwood Hall and the substation. These help to filter views of the substation from this location leaving only a section of the building visible between the two woods and partly filtered by other planting. However, it is possible that from the slightly elevated position around the Hall and when moving around the parkland the visibility of the development will change and may increase. This would erode the rural character of the wider landscape and potentially create a modern feature that would detract from the natural focal points of the areas of woodland on either side. This would result in some harm to the significance of the historic landscape. The Report notes views from church would be screened.
- 2.8. In relation to Historic Environment Policy the National Planning Policy Framework requires that when considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance, paragraph 193. It continues that any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification, paragraph 194. The significance should be taken into account when considering the impact of a proposal on a heritage asset, to avoid or minimise any conflict between the



heritage asset's conservation and any aspect of the proposal, paragraph 190. Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, paragraph 196.

- 2.9. In summary, the analysis set out above illustrates how the rural landscape contributes to the significance of the historic buildings at Mangreen Hall and Gowthorpe Manor and the historic landscape at Intwood Hall. A more detailed analysis of the significance and impacts in the Historic Environment section of the Environmental Statement would have been helpful together with other visual information to illustrate the impact on Mangreen and Gowthorpe. However, the images that have been produced to illustrate the proposed substation/convertor development do show the scale of this within the landscape. It is clear that this development would erode the rural landscape setting to the grade II\* sites at Mangreen Hall and Gowthorpe Manor causing considerable harm to their setting. It would also result in some harm to the grade II\* historic landscape at Intwood Hall. We confirm our view that there is a significant impact in EIA terms, and in line with planning policy the harm would need to be weighed against the public benefits of the proposal. As stated in the NPPF any harm requires clear and convincing justification and we would want to be reassured that should the DCO be granted the balancing exercise has been undertaken and that there the public benefit can clearly be demonstrated to outweigh this harm.

### 3. Comments in relation to the Onshore WSI

- 3.1. In relation to the onshore WSI we are aware that this is primarily a matter for the Local Planning Authority's specialist Archaeological Advisors. We are however concerned that the Onshore WSI has not been included in the full ES as submitted.
- 3.2. We would however wish to reinforce the point there is a need for a full and comprehensive survey of the route to be undertaken prior to any ground works, or preliminary access works being undertaken. Whilst we accept that this work is due to be undertaken post-consent, its needs to be recognised by the applicant that there is a high potential for new heritage assets to be identified as part of this work, and these assets would be of undetermined significance at this stage.

### 4. Comments in relation to the Environmental Statement: Chapter 3 – Project Description – PINS Document Reference A6.1.3 APFP Regulations 5(2)(a):

- 4.1. We acknowledge that this chapter sets out the project design envelope for the onshore and offshore elements, in particular the details of the maximum design scenario. In particular, we note that Section 3.3 'Hornsea Three Boundary' sets



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out the parameters of the project, including; the array area, the offshore cable corridor, and the onshore cable corridor, and Section 3.4 'The Agreement for Lease (AfL) area' sets out the areas agreed to be leased by The Crown Estate, as approximately covering 696km<sup>2</sup> as a diamond shape 29km E-W and 35km N-S.

- 4.2. We request clarification as to whether any consideration has been given at this stage to the location of working areas (i.e. anchor areas, wet storage, etc.), or whether they are only identified as being within the Development Consent Order (DCO) boundaries.
- 4.3. We note from paragraph 3.6.2.2 that a number of pre-construction surveys will be undertaken 1-2 years prior to the start of offshore construction works. The Retained Archaeologist and Archaeological Curator must be given the opportunity to review survey specifications and plans, as set out in the project Written Scheme of Investigation (Volume 5, Annex 9.2), in order to provide input into any surveys undertaken. This is to ensure the collection of sufficient quantity and adequate quality data for archaeological analysis which would feed into mitigation measures applied for archaeological receptors.
- 4.4. Within paragraphs 3.6.2.28-30, regarding Pre-Lay Grapnel Runs, no details are provided as to precisely which cables will be affected (array, interconnector, and export cables) or the width of the potential impact along the final cable route. It is assumed that this activity will be within the boundary of the pre-construction clearance works, but this is not clear and should be explained.
- 4.5. We note from Table 3.9 'Foundation options for turbines and offshore structures' that all concepts of floating foundations have been removed as an option. However, there is no detailed information provided within paragraphs 3.6.9.28-31 in regards to the installation process for subsea booster stations. We would therefore require further details of the installation methodology, when available, for review to ensure that all impacts to archaeological receptors have been considered adequately.

**5. Comments in relation to the Environmental Statement: Volume 2, Chapter 9 – Marine Archaeology – PINS Document Reference: A6.2.9 APFP Regulation 5(2)(a) (dated May 2018), prepared by RPS on behalf of Ørsted Power (UK) Ltd:**

- 5.1. We note from paragraph 9.3.1.1 that there are two study areas considered within the assessment; one – the Hornsea Three marine archaeology study area, encompassing the array area, offshore cable corridor and temporary working areas of 600m either side, and the intertidal area seaward of MHWS; two – the regional marine archaeology study area – defined as a 20km buffer around the



array area and offshore cable corridor, extended to include Hornsea One and Two.

- 5.2. We acknowledge the detail of the assessment as presented within this chapter, and we are inclined to accept that the data available for the ES was adequate to inform a suitable baseline at this stage. However, we wish to see further detail regarding the delivery of a full baseline across the entire area to be impacted post-consent. In particular, we note from paragraph 9.6.2.2 that there is a data gap over the area of the cable route where the route has been amended since the Preliminary Environmental Information Report (PEIR). As such, we would wish to see further information clearly demonstrating the area where this data gap exists, and the programme for conducting surveys within these area(s).
- 5.3. Furthermore, we are in general content that Table 9.8 'Maximum design scenario considered for the assessment of potential impacts on marine archaeology' presents a reasonable and comprehensive scenario, and with the impact assessment methodology for archaeological receptors as presented within Section 9.9.
- 5.4. An assessment of the significance of impacts is presented by receptor and impact type within Section 9.11. Beyond our comment made in reference to paragraph 9.11.1.15 below, we are content that the impact assessment is adequate. Furthermore, we are content with the cumulative assessment, as presented in Section 9.13. Therefore, subject to the production and agreement with Historic England of a Written Scheme of Investigation (WSI), its implementation and the further analysis and interpretation of data as set out in the WSI, we are inclined to agree with the summary of the impact assessment as set out in in Section 9.16 'Conclusion and Summary'. However, we wish to make the following comments regarding the detail presented within this chapter as follows.
- 5.5. We requested in our advice to the PEIR that the date range for the Pleistocene period be added into Section 1.5.1.6. This has not been done, despite the fact that the Pleistocene period is mentioned in Section 1.6.2.5.
- 5.6. We note that Section 9.4 'Planning policy context' details the relevant policies with marine archaeology provisions, including the Energy NPS and Renewables NPS, and the UK Marine Policy Statement. However, we further note that the Marine and Coastal Access Act 2009 is not listed within this section. Similarly, the relevant heritage legislation (i.e. Protected Wrecks Act 1973) is not included within this section, and are instead presented solely within the Marine Archaeology Technical Report. As such, this matter is not represented in a logical manner between the chapter and associated appendices and must be resolved.



- 5.7. Within Table 9.1 'Summary of NPS EN-3 provisions relevant to this chapter' the Marine Archaeology Technical Report appears to have two different references in this cell, and therefore needs to be corrected.
- 5.8. Within Table 9.3 reference is made to the 'Geophysical WSI'. However, it should be noted that this document is not, and should not be referred to as, a WSI. A single WSI will be produced for the offshore elements of this project, to which Method Statements, such as the one produced for geophysical survey interpretation, must be appended.
- 5.9. Table 9.4 'Summary of key desktop reports' presents the main resources used in the desk-based assessment. There are a number of datasets listed, and we acknowledge that the primary sources we would expect to see are included. However, it is noted that the year listed for the NRHE is 2003 and 2005. We request clarification as to what this means. It should be noted that data holders should be contacted for the most up-to-date datasets within their archives.
- 5.10. We note from paragraph 9.6.2.2 that there is a data gap over the area of the cable route where the route has been amended since the PEIR. As such, we would wish to see further information clearly demonstrating the area that has yet to be covered, and the programme for conducting surveys within these area(s).
- 5.11. Table 9.5 'Summary of site-specific survey data' includes an adequate level of detail regarding the coverage, age and location of surveys conducted. However, this could be improved by being accompanied by a map demonstrating the coverage of each survey and the location of vibrocores and boreholes.
- 5.12. There appears to be an inconsistency within paragraph 9.7.6.5 in regards to how many recorded positions are within the regional study area (126 or 118), which must be corrected.
- 5.13. We note that paragraph 9.9.1.2 details the documents used to inform the impact assessment methodology for archaeological receptors. It should be noted that 'Conservation Principles' (English Heritage, 2008) has now been updated (Historic England, 2018).
- 5.14. Section 9.10 'Measures adopted as part of Hornsea Three' and Table 9.12 'Designed-in measures adopted as part of Hornsea Three' describes a number of designed-in measures proposed to reduce the potential for impacts on marine archaeology. In general, we are satisfied that these measures are appropriate.
- 5.15. Paragraph 9.10.2.2 states that 'If impacts cannot be avoided, measures to reduce, remedy or offset disturbance will be agreed.' It should be clarified in this



point that agreement should be sought with the relevant archaeological curator, in most cases Historic England.

- 5.16. Section 9.10.3 reads 'Perseveration by record', this needs amending to 'Preservation by record'.
- 5.17. Paragraph 9.11.1.9 describes that the measures set out in Table 9.9 enable the best possible 'preservation by record' scenario for near-surface prehistoric land surfaces, through further survey and analysis of the palaeoenvironmental record. It is crucial therefore that this analysis is both detailed and complete.
- 5.18. Paragraph 9.11.1.15 concludes that the effect of sediment removal or disturbance of sediments on near-surface prehistoric land surfaces will be of minor adverse significance. Whilst we do not altogether disagree with this assessment, we wish to note that this conclusion is subject to the adequate discharge of the measures set out in Table 9.9.
- 5.19. Paragraphs 9.11.1.51, 9.11.2.21 and 9.11.3.20 states that 'other than those measures described in the Outline WSI ... no future monitoring will respect to any of the above construction phase effects is warranted or recommended. We do not agreed with this statement and wish for further discussion and consideration be conducted.
- 5.20. Section 9.11.2 'Operational and maintenance phase' describes the impact assessment for the operation and maintenance phase of the project. Based on the described predicted impacts and subject to the use of the measures in Table 9.9 we are content with this assessment. However, there must be a clear work package within the WSI for this phase of the project.

**6. Comments in relation to the Environmental Statement: Volume 5, Annex 9.1 – Marine Archaeology Technical Report PINS Document Reference: A6.5.9.1 APFP Regulation 5(2)(a):**

- 6.1. In general, we are content with the information as presented within Annex 9.1. However, we wish to make the following comments in relation to the detail of the text.
- 6.2. In our response to the PEIR (dated 20<sup>th</sup> September 2017), we requested that paragraph 2.2.3.1 is amended to include Historic England Marine Geophysics Guidance (2013). We are disappointed to see that this has not been updated for the ES.



- 6.3. Paragraph 2.3.1.1 states that the NRHE includes BMAPA protocol finds data, but this information as well as finds from ORPAD should be accessed independently of the NRHE due to the delay between reporting and uploading of finds information to this dataset.
- 6.4. Paragraph 2.3.1.2 states the secondary sources consulted, but it is noted that the Lost Frontiers project is not included here. This project must be consulted as it offers valuable information for this assessment.
- 6.5. Section 2.3.2 'Field surveys' describes the geophysical and geotechnical surveys that were conducted and utilised in the archaeological assessment. Whilst we note that a figure is included that illustrates the locations of cores used in the assessment, it would have been useful for a figure to be included that likewise illustrated the location (and line spacing/coverage) of the geophysical data. Equally, paragraph 2.3.2.1 states the array area and cable corridor was covered by surveys with the exception of the cable route area, which has been altered between the submission of the PEIR documents and the submission of the Environmental Statement. We therefore require further details from the applicant in regards to the completion of an adequate baseline assessment for this area, in light of the data gap.
- 6.6. We note from Section 2.3.2.8 that a series of methods, such as UXO and ROV searches will be considered to reduce the risk of impacts to anomalies that may not be visible within the geophysical survey. However, a strategy needs to be developed for how this will be employed and when.
- 6.7. Paragraph 2.3.2.7 of the PEIR did not identify if any areas warranted additional survey work after the data was reassessed from existing surveys. We asked for this to be clarified and it has been stated within paragraph 2.3.2.9 of the ES that no additional surveys are required. We are not content that additional surveys are ruled out at this stage.
- 6.8. In reference to the 7 boreholes that were collected from within the intertidal area as described in paragraph 2.3.2.20, the results of the interpretation of these cores must be incorporated with the ground model and the offshore results to provide a seamless interpretation from onshore to offshore.
- 6.9. There are discrepancies between the number of medium and low potential contacts given within paragraph 3.6.1.2 and Table 3.3, which must be corrected.
- 6.10. We request clarification as to why only some of the recorded wrecks with no seabed contact discussed in Section 3.6. Furthermore, those within the cable corridor are listed within UHKO numbers not UKHO numbers. This should be corrected.



- 6.11. In relation to paragraphs 3.6.2.4-3.6.2.8 of the PEIR, we asked for clarification about how anomalies of low potential would be dealt with in terms of their mitigation. In paragraph 3.6.2.11 of the ES, it is stated that low potential anomalies are assumed to be low potential and therefore will not be discussed further. However, this does not take account of if the potential has not been picked up by the geophysical approaches used. Whilst, this has been amended in Annex 9.2 (Outline WSI), paragraph 2.3.2.8 appears to contradict this proposal as it is stated that UXO and ROV surveys are being considered in order to understand the risk to some anomalies.

## 7. Comments in relation to the Draft Development Consent Order including Draft Deemed Marine Licences PINS Document Reference: A3.1 Regulation 5(2)(b):

- 7.1. We note the Deemed Marine Licences (DMLs) are set out in Schedules 11 (Generation Assets) and 12 (Transmission Assets) of the DCO. Our comments on the DCO and these DMLs are as follows.
- 7.2. All references to the Outline WSI (singular) in the DCO must be amended to WSIs (plural) to reflect the use of an onshore and offshore WSI.
- 7.3. The definition of ‘commence’ is presented within Part 1, Section 2(1) as “(a) *in relation to works seawards of MHWS, the first carrying out of any licensed marine activities authorised by the deemed marine licences, save for operations consisting of offshore site preparation works, pre-construction monitoring surveys approved under the deemed marine licences, and (b) in respect of any other works comprised in the authorised project, the first carrying out of any material operation (as defined in section 155 of the 2008 Act) forming part of the authorised project other than site preparation works and the words “commencement” and “commenced” must be construed accordingly*”. We would disagree with this definition and request that the term commencement includes both pre-construction monitoring surveys and site preparation works, in order to ensure the production, agreement and implementation of the offshore WSI prior to such works. This would not only ensure adequate mitigation measures are developed for site preparation works, but ensure that the survey data are incorporated into the development of mitigation strategies. This should there be amended within this paragraph, and within the definitions listed in Schedule 11, Part 1, Section 1, paragraph 1 and Schedule 12, Part 1, Section 1, paragraph 1.
- 7.4. The definition of “statutory historic body” as listed within Schedule 11, Part 1, Section 1, paragraph 1 and Schedule 12, Part 1, Section 1, paragraph 1 is given as ‘Historic England or its successor in function’. This should be amended to the ‘Historic Building and Monuments Commission for England’.



- 7.5. Schedule 11, Part 1, Section 6 and Schedule 12, Part 1, Section 6 states that “Any offshore site preparation works undertaken shall not be considered to have commenced the licenced activities for the purposes of any condition of this licence that requires any discharge prior to such commencement”. We are not content with this, due to the need to produce and agree a WSI prior to ‘commencement’ as described in our comment above.
- 7.6. We note that Schedule 11, Part 2, Section 4 and Schedule 12, Part 2, Section 4 describes the operation and maintenance works that to be included under the DMLs. Whilst we have no objects to this approach, suitable provisions must be included within the WSI for O&M works.
- 7.7. The provisions for the production and agreement of a Written Scheme of Investigation are set out in Section 11(2) of Part 2 of Schedules 11 and 12. Aside from the issue with commencement, as described above, we are largely content with the provisions set out. However, we request that consideration is given to the inclusion of archaeological mitigation within Schedules 11 and 12, Part 2, Section 15 in order to monitoring the effectiveness of the mitigation measures applied.

**8. Comments in relation to the Environmental Statement: Volume 5, Annex 9.2 – Outline Written Scheme of Investigation PINS Document Reference: A.6.5.9.2 APFP Regulation 5(2)(a):**

- 8.1. We note from paragraph 1.1.1.4 that the ‘document will be monitoring and updated throughout the post-consent process... Prior to construction commencing, this Outline WSI will be finalised and incorporated into the Code of Construction Practice (CoCP) and submitted to the Marine Management Organisation (MMO) for approval.’ The finalisation of the WSI prior to commencement is crucial, and as such must be clearly conditioned within the DMLs. However, this must also be completed prior to the commencement of pre-construction surveys to ensure that they are conducted as per current best practice advice.
- 8.2. There appear to be a number of inconsistencies within Section 2 ‘Hornsea Three’ in regards to the number of turbines and cable length.
- 8.3. Paragraph 3.3.1.3 clarifies that AEZs will not be allocated to each of the 228 low potential anomalies unless they are at risk of damage/disturbance once the detailed design stage is complete. At this point, an AEZ will be employed, but it is not clear how this will be decided and what the criteria will be that will result in an AEZ being applied to a feature. This must be clarified.



- 8.4. Significant magnetic anomalies are mentioned in paragraph 3.3.1.3 as being indicative of archaeological potential, but it should be noted that organic remains, such as wooden vessels/structures or peat deposits can be of high archaeological significance, but are generally not associated with a strong magnetic response.
- 8.5. We would wish to see amendments made to Table 5.1 'Designed-in measures adopted as part of Hornsea Three' to specify the provision for the archaeological curator (in most cases Historic England) to have the opportunity to review and provide input for any planned geophysical, geotechnical and diver/ROV surveys. Furthermore, the provision of input into geotechnical surveys must be expanded to include input in relation to the retention and storage of cores collected, to enable appropriate analysis and interpretation to take place.
- 8.6. Additionally, Table 5.1 of the PEIR states that 'operational awareness' would be maintained for areas of low potential, with an agreed reporting protocol in place. We felt that this contradicted the statement in paragraph 3.3.1.3 and therefore needed to be clarified, but this has not been changed for the ES.
- 8.7. Figure 6.2 should be corrected to identify that key Historic England consultees are the projects designated Marine Planning Archaeologist and Science Advisor. Furthermore, the reference to English Heritage within paragraph 6.3.1.1 should be replaced with Historic England.
- 8.8. We wish to see provision added to Section 6.4 'Responsibilities', Subsection 6.4.1 'Hornsea Three Project Manager' to ensure the delivery of the requirements of this WSI within agreed timescales.
- 8.9. Further detail is required within Subsection 6.4.3 'Archaeological Contractors' to include their responsibility to follow the provisions of the WSI and any relevant method statements, as advised by the retained archaeologist.
- 8.10. Paragraph 7.1.1.1 contains a single sentence repeated three times. This must be corrected.
- 8.11. We welcome the inclusion within paragraph 7.2.1.1 of detail regarding the early consultation of the retained archaeologist in regards to the planning of future geophysical and geotechnical surveys. However, we would wish to see further detail included within this paragraph regarding the consultation of the archaeological curator also.
- 8.12. Additionally, it should not be ruled out for opportunities to be sought for the collection of data purely for archaeological purposes.



- 8.13. Figure 7.1 'Anticipated timeframes for planned offshore geophysical and geotechnical survey works for Hornsea Three' provides insufficient information to be a useful aid and needs to be amended.
- 8.14. In relation to Table 7.1 'Overview of pre-application and pre-development offshore geophysical and geotechnical surveys for Hornsea Three', we requested at the PEIR that an indication of percentage coverage of the geophysical techniques used on the site be included in the ES. This has been included for the future surveys that have been proposed, but not for the existing surveys that have been completed.
- 8.15. In addition to Table 7.1 it would be useful to include a figure to demonstrate the different coverage of each survey (geographically), inclusive of line spacing. Another useful detail to include within Table 7.1 would be the timing of surveys to cover the working areas.
- 8.16. The submission to the Archaeological Curator of a Method Statement as detailed in paragraph 7.2.1.5 must be at least 1 month prior to the planned commencement of the survey, in order to allow for sufficient time for the review of the Method Statement and any amendments to be completed and agreed.
- 8.17. The scope for further survey work as detailed within Subsection 7.3.3 'Further surveys that will require archaeological work' should include provision for the inspection of a representative sample of low potential anomalies for ground-truthing purposes.
- 8.18. In relation to Section 7.4, we stated at the PEIR that full coverage or greater should be achieved for the side scan sonar and multibeam surveys, but no text has been included in this section that addresses this. Additionally, the first line of paragraph 7.4.1.3 should be amended as follows: "*A sidescan sonar survey will be carried out at frequency, range and gain settings capable of resolving as a minimum objects that are 0.5m and above throughout the survey area.*"
- 8.19. The submission of a report to the Archaeological Curator for review, as detailed in paragraph 7.4.2.3, should be completed within 3 months of the completion of the survey. The text should be amended to reflect this.
- 8.20. Section 7.5 'Geotechnical surveys' needs to be amended to include clear provisions for the development of a collection, retention and storage strategy for cores to allow for analysis to take place. In particular, we provided in our advice to the PEIR the need to collect the cores using light-proof sleeves, and that the cores needed to be stored and split under safe-light (dark) laboratory conditions. However, no text has been included within the ES about the sampling and storage needs of OSL samples.



- 8.21. In relation to the Stage 1 assessment, as described in Subsection 7.5.2, it is recommended that a geoarchaeologist is present during the initial splitting and recording of cores.
- 8.22. Additional detail should be included within paragraph 7.5.5.1 in relation to the potential use of OSL dating in addition to radiocarbon dating, in order to be consistent with statements given in paragraph 7.2.1.3.
- 8.23. Paragraphs 7.5.6.2 and 8.1.1.7 should include a clear timescale for the delivery of the report to the Archaeological Curator. It is recommended that all reports should be submitted within 3 months of the completion of surveys.
- 8.24. Further detail is required within Section 8 'Pre-construction ROV and/or Diver Surveys' to consider the examination of a sample of lower potential anomalies with no AEZ, to ground-truth and test the interpretation of the geophysical data.
- 8.25. Within paragraph 8.1.1.2 the use of the term 'level' and a numerical value to describe the staged approach to survey work is confusing with the levels of recording that are set out in Appendix D. It is suggested that an alternative term is used in this paragraph.
- 8.26. Within paragraph 8.1.1.3 provision should also be given to having the method statement reviewed by the Archaeological curator, in addition to the Retained Archaeologist. Furthermore, the Retained Archaeologist should be able to input the provisions of additional contacts for review for solely archaeological purposes.
- 8.27. Section 9 'SeaZone and UKHO Records Classified as 'Dead'' provides insufficient detail, and the signposted Table 5.1 provides little more. Further information should be provided within this section.
- 8.28. Further detail is required within paragraph 10.1.1.4 as to how the details regarding AEZs will be distributed to all relevant staff and contractors, and any measures proposed to ensure their understanding of the principles behind AEZS and their avoidance during construction, O&M and decommissioning activities.
- 8.29. The last sentence of paragraph 10.2.1.1 should be removed. Additionally, there is an inconsistency between this paragraph and paragraph 10.5.1.1 in regards to the number of anomalies that warrant protection via AEZs. This must be corrected.
- 8.30. The submission of the report as detailed within paragraph 10.5.1.3 must include a timeframe for delivery, to be agreed with the Archaeological Curator.



- 8.31. Further detail is required in Section 13 'Pre-construction Cable Route Clearance' regarding the potential need for the production of a Watching Brief Method Statement, and detail regarding the archaeologists authority to stop works to allow for adequate inspection and recording of any finds or features as necessary. They should also be able to fully halt the construction in the event of a significant find.
- 8.32. Further detail is required in Section 14 'Mitigation of Unavoidable Direct Impacts on Known Sites' regarding the production of a method statement detailing measures to be applied, including a time frame for the its production and agreement with the Archaeological Curator.
- 8.33. It should be noted that the Protocol for Archaeological Discoveries as detailed in Section 15, should be implemented over the life of the project including the operational and maintenance, and decommissioning phases. Paragraph 15.1.1 should be amended to reflect this.
- 8.34. Further detail should also be provided within Section 15, regarding the training of project and vessel staff, and the timescales for the submission of reports throughout the construction phase.
- 8.35. The archiving of reports with the NRHE and submission of an OASIS form, as detailed in paragraph 15.3.1.5, should be completed within a timeframe agreed with the Archaeological Curator. It is recommended that this should be within 3 weeks of the completion of the report.
- 8.36. Further detail is required in paragraph 16.1.1.2 in relation to the definition of 'the completion of works'.
- 8.37. Further detail is required across Section 16 'Reporting' in relation to how the reporting and publication process will occur, especially in regards to the timeframes for the delivery of reports, submission of OASIS forms and deposition of archives.
- 8.38. We no longer wish to see the WSI revised over the lifetime of the project. As such, amendments to Section 17 'Arrangements for Monitoring and Reviewing the Written Scheme of Investigation' must detail the production of a final WSI at least 6 months prior to the commencement of any works, including surveys and site preparation. Additional investigations or amendments will subsequently be included within specific Method Statements. Such Method Statements must be submitted to the Archaeological Curator for approval at least 1 month prior to the commencement of any works they describe.



- 8.39. Within Section A.4 of Appendix A 'Protocol For Archaeological Discoveries' further detail is required to set out the provisions for the stoppage of works should the discovery of features of archaeological significance occur. Additionally, it should be noted that in as well as being stored in seawater, finds should be kept in a cool dark place and that if available fresh water is preferable to seawater.
- 8.40. A clear timeframe for the deposition of the Revised Summary Report should be included within paragraph A.7.7.1.

**9. Comments in relation to the Environmental Statement: Volume 4, Annex 3.6 – Offshore Operation and Maintenance Licensable Activities PINS Document Reference: A6.4.3.6 APFP Regulations 5(2)(a):**

- 9.1. We note from Table 1.2 'Hornsea Project Three O&M Activities – generator assets' and Table 1.3 'Hornsea Project Three O&M Activities – transmission assets' within Annex 3.6 'Offshore Operation and Maintenance Licensable Activities' in Volume 4 that the raising of a jack-up vessel and the moving of scour protection are not included as licensable activities. We disagree with this assessment, as request that they are included within consideration as licensable activities, due to their potential to impact the seabed, and hence archaeological receptors.

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