RWE Renewables UK Dogger Bank South (West) Limited

RWE Renewables UK Dogger Bank South (East) Limited

Dogger Bank South Offshore Wind Farms

Environment Statement

Volume 7

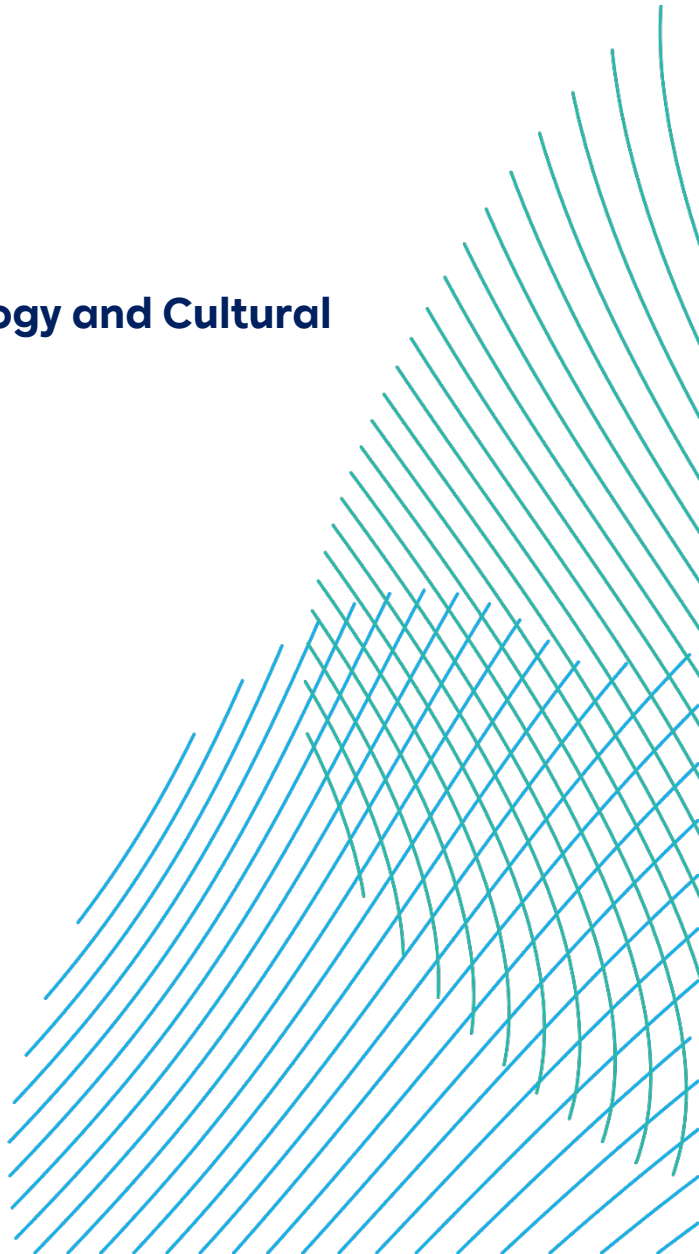
Appendix 17-1 Offshore Archaeology and Cultural Heritage Consultation Responses

June 2024

Application Reference: 7.17.17.1

APFP Regulation: 5(2)(a)

Revision: 01



Unrestricted

Company:	**RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited**	Asset:	**Development**
Project:	**Dogger Bank South Offshore Wind Farms**	Sub Project/Package:	**Consents**
Document Title or Description:	Appendix 17.1 Offshore Archaeology and Cultural Heritage Consultation Responses		
Document Number:	004300158-01	Contractor Reference Number:	PC2340-RHD-OF-ZZ-AX-Z-0058

Rev No.	Date	Status/Reason for Issue	Author	Checked by	Approved by
01	June 2024	Final for DCO Application	RHDHV	RWE	RWE

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Glossary

Term	Definition
Array Areas	The DBS East and DBS West offshore Array Areas, where the wind turbines, offshore platforms and array cables would be located. The Array Areas do not include the Offshore Export Cable Corridor or the Inter-Platform Cable Corridor within which no wind turbines are proposed. Each area is referred to separately as an Array Area.
Cumulative Effects Assessment (CEA)	The assessment of the combined effect of the Projects in combination with the effects of a number of different (defined cumulative) schemes, on the same single receptor / resource.
Cumulative impact	The combined impact of the Projects in combination with the effects of a number of different (defined cumulative) schemes, on the same single receptor / resource.
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for one or more Nationally Significant Infrastructure Project (NSIP).
Dogger Bank South (DBS) Offshore Wind Farms	The collective name for the two Projects, DBS East and DBS West.
Effect	Term used to express the consequence of an impact. The significance of an effect is determined by correlating the magnitude of the impact with the value, or sensitivity, of the receptor or resource in accordance with defined significance criteria.
Environmental Statement (ES)	A document reporting the findings of the EIA and produced in accordance with the EIA Directive as transposed into UK law by the EIA Regulations.
Evidence Plan Process (EPP)	A voluntary consultation process with specialist stakeholders to agree the approach, and information to support, the Environmental Impact Assessment (EIA) and Habitats Regulations Assessment (HRA) for certain topics.

Term	Definition
Expert Topic Group (ETG)	A forum for targeted engagement with regulators and interested stakeholders through the EPP.
Historic seascape character	The attributes that contribute to the formation of the historic character of the seascape.
Intertidal	Area on a shore that lies between Mean High Water Springs (MHWS) and Mean Low Water Springs (MLWS).
Landfall	The point on the coastline at which the Offshore Export Cables are brought onshore, connecting to the onshore cables at the Transition Joint Bay (TJB) above mean high water.
National Policy Statement (NPS)	A document setting out national policy against which proposals for NSIPs will be assessed and decided upon.
Nearshore	The zone which extends from the swash zone to the position marking the start of the offshore zone (~20m).
Offshore Development Area	The Offshore Development Area for ES encompasses both the DBS East and West Array Areas, the Inter-Platform Cable Corridor, the Offshore Export Cable Corridor, plus the associated Construction Buffer Zones.
Preliminary Environmental Information Report (PEIR)	Defined in the EIA Regulations as information referred to in part 1, Schedule 4 (information for inclusion in environmental statements) which has been compiled by the applicant and is reasonably required to assess the environmental effects of the development.
Scoping opinion	The report adopted by the Planning Inspectorate on behalf of the Secretary of State.
Scoping report	The report that was produced in order to request a Scoping Opinion from the Secretary of State.

Term	Definition
Seabed features	Features seen on the seafloor in the sidescan sonar or multibeam bathymetry data which are interpreted to represent heritage assets, or potential heritage assets. Also includes magnetic anomalies which may represent shallow buried ferrous material of archaeological interest.
The Applicants	The Applicants for the Projects are RWE Renewables UK Dogger Bank South (East) Limited and RWE Renewables UK Dogger Bank South (West) Limited. The Applicants are themselves jointly owned by the RWE Group of companies (51% stake) and Masdar (49% stake).
The Projects	DBS East and DBS West (collectively referred to as the Dogger Bank South Offshore Wind Farms).
Wind turbine	Power generating device that is driven by the kinetic energy of the wind.

Acronyms

Term	Definition
AEZ	Archaeological Exclusion Zones
CIfA	Chartered Institute of Archaeologists
CEA	Cumulative Effects Assessment
DBS	Dogger Bank South
DCO	Development Consent Order
ES	Environmental Statement
EPP	Evidence Plan Process
ETG	Expert Topic Group
IEMA	Institute of Environmental Management and Assessment
IHBC	Institute of Historic Building Conservation
km	Kilometre
m	Metre
Mag.	Magnetometer
MBES	Multibeam Echosounder
NPS	National Policy Statement
PEIR	Preliminary Environmental Information Report
SSS	Side Scan Sonar
UKHO	United Kingdom Hydrographic Office
UXO	Unexploded Ordnance
WSI	Written Scheme of Investigation

17.1. Consultation Reponses

17.1.1. Introduction

1. This appendix covers those statutory consultation responses that have been received as a response to the Scoping Report (2022), the Preliminary Environmental Information Report (PEIR) (2023) and Expect Topic Group (ETG) meetings.
2. Response from stakeholders and regard given by the Applicants have been captured in **Table 17-1-1**.

Table 17-1-1 Consultation Responses Related to Chapter 17 Offshore Archaeology and Cultural Heritage

Comment	Project Response
Historic Environment ETG (Pre-Scoping) 15/09/2021	
Question on the present programme of primary data acquisition.	Marine geophysical survey data have been assessed by Wessex Archaeology. The results have been discussed through the Evidence Plan Process (EPP) with the Historic Environment ETG (meeting on 20/09/2023) and have informed the Environmental Statement (ES). The process of site specific survey and assessment is discussed in section 17.4.2.1 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**.
The high level of coastal erosion has led to a number of 'lost villages' particularly south of Hornsea, which should be considered. The area under consideration has been subject to a research study by Humber Archaeology / Historic England to map wrecks and underwater features, the information would be pertinent to this work.	The archaeological potential relating to lost villages and the Rapid Coastal Zone Assessment for Yorkshire and Lincolnshire undertaken by Humber Archaeology are considered in section 17.5.3 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**.
Question on survey work in 2022 and how geophysical and geotechnical work will be undertaken over such a large area.	Surveys were not undertaken at Scoping stage given the large size of the area. Following the completion of site selection, site specific surveys were carried out and the data assessed by Wessex Archaeology.
Question on historic seascape characterisation and how the changes that are occurring and likely to occur in the area will be taken into consideration. Historic England advocate an approach that defines and interprets changes to historic character.	The National Historic Seascape Characterisations has been used as the basis for the description of the historic seascape character in section 17.5.4 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**, with consideration of how this has changed since compilation of the dataset.
Collaboration with other projects in the area is important, especially Sofia and the Dogger Bank projects.	Information from the Dogger Bank and Sofia schemes are referenced where relevant with respect to the existing environment in section 17.5 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**. A commitment to data sharing and integration with wider assessments and research initiatives is set out in the Cumulative Effects Assessment (CEA) (section 17.8) and **Volume 8, Outline (Offshore) Written Scheme of Investigation (WSI) (application ref: 8.22**) submitted alongside the ES and Development Consent Order (DCO) application.
The Crown Estate has recently re-published the Guide to Written Schemes of Investigation for Offshore Wind.	The updated guidance has been referenced within the ES and forms the basis for **Volume 8, Outline (Offshore) WSI (application ref: 8.22)** submitted alongside the ES and DCO application.
Question on how the process of refining anomalies will be undertaken.	Wessex Archaeology were contracted to undertake the archaeological assessment of marine geophysical data and the approach, and results have been

Comment	Project Response
	discussed through ETG meetings with Historic England (meetings on 10/05/2023 and 20/09/2023).
Planning Inspectorate Scoping Opinion 02/09/2022	
The Scoping Report describes the potential impacts to archaeological material resulting from changes in the hydrodynamic regime and sedimentary processes. The inter-relationship between the Marine Physical Processes assessment and the Offshore Archaeology and Cultural Heritage assessment should be explained in the ES, in particular how the assessments have informed each other where applicable	Inter-relationships between Offshore Archaeology and Cultural Heritage and Marine Physical Environment are described in section 17.11 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**, and further described in sections 17.6.1.3, 17.6.2.3 and 17.6.3.3 as "Impact 3: Indirect impact to heritage assets from changes to physical processes".
The Scoping Report identifies the intention to carry out geophysical survey of the array areas and offshored export cable corridor(s) in 2022. The export cable corridor has not yet been fully defined and it will be essential for the ES to clearly set out the areas subject to this survey. Archaeological expertise should be used to inform the approach to geophysical assessment and the ES should also explain how stakeholder consultation has informed the data collection for the assessment The Inspectorate recommends that the Applicant makes effort to agree the survey methodology and the investigations needed to inform the assessment and any mitigation measures with the relevant consultation bodies including Historic England.	The approach to site specific surveys and archaeological assessment is set out in section 17.4.2.1 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**. Marine geophysical and geotechnical data were acquired from the Offshore Development Area by Fugro in 2022. Assessment of this data has been undertaken by specialist archaeological geophysicists at Wessex Archaeology and the full assessment results inform the ES.
The strategy for mitigation identified should be fully described in the ES, including the need for the application of Archaeological Exclusion Zones (AEZs); and if required, details of the exclusion zones including the mechanism for securing them. The Inspectorate also advises that an archaeological Written Scheme of Investigation (WSI) should be produced, and effort made to agree it with consultation bodies, to enable the scope of archaeological investigation and mitigation to be determined and secured throughout the consenting process and post-consent.	The approach to embedded mitigation is set out in section 17.3.3 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**. Additional mitigation requirements which include the application of AEZs are proposed in the relevant sections of the assessment of effects presented in section 17.6 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**. The proposed approach to the delivery of mitigation post-consent, and how the outcomes of additional investigation will influence the final design of the Projects, is set out in **Volume 8, Outline WSI (Offshore) (application ref: 8.22)**, prepared in accordance with industry good practice guidance on Archaeological WSIs (The Crown Estate, 2021). The Outline WSI accompanies the ES and DCO application.
The Inspectorate notes the intention in this section for archaeological involvement in geophysical and geotechnical survey work. The ES should describe how impacts to unknown assets, including paleogeographic deposits, that may be discovered would be mitigated and how the mitigation is to be secured.	Impacts to unknown assets are assessed in sections 17.6.1.2, 17.6.2.2 and 17.6.3.2 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**. Planned geotechnical surveys will be subject to geoarchaeological assessment, including input into planning the surveys from a specialist marine geoarchaeologist. All available geophysical and geotechnical survey data have been assessed by Wessex Archaeology. The proposed approach to the delivery of mitigation post-consent, and how the outcomes of additional investigation will influence the final design of the Projects, is set out in **Volume 8, Outline WSI (Offshore) (application ref: 8.22)** submitted alongside the ES and DCO application.

Comment	Project Response
Historic England Scoping Response 02/09/2022	
It is an important observation about the information presented in this EIA Scoping Report, that while an estimated diameter is offered for various foundation designs, it doesn't seem that estimates are provided about depth of penetration of these designs into and beneath the contemporary seabed or wider area of seabed clearance required to support placement. Such detail is particularly relevant when considering impact as may arise from gravity base foundations and suction buckets.	Foundation penetration depths are provided in Table 17-2 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**. Suction bucket and gravity base foundations have been removed from the design envelope for wind turbine foundations, but may still be used for the offshore platforms required for the Projects. Maximum volumes of displaced sediment and potential areas for seabed preparation associated with these gravity based foundations are also included in Table 17-2 (**Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**).
Section 2.1.3.1.2 (Effects on bedload sediment transport and seabed morphological change) – In reference to the statement about possible localised effects of construction associated with foundation and cable installation, it is directly relevant to consider the scale and magnitude of possible infrastructure to be placed on and within the contemporary seabed (e.g. as described in section 1.4.1.3). We therefore must consider the risk that this project may encounter geoarchaeological sedimentary evidence of considerable importance and crucial to our understanding about paleoclimatic change. Furthermore, until demonstrated otherwise through geophysical and geotechnical survey work, it is reasonable to consider that such sedimentary sequences and evidence of prehistoric landscape features exist within the proposed development area (as described within Section 2.13).	The potential for submerged prehistoric landscapes is described in section 17.5.1of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)** informed by palaeolandscapes assessment (**Volume 7, Appendix 17-3 (application ref: 7.17.17.3)**) and geoarchaeological review of borehole and vibrocore logs (**Volume 7, Appendix 17-4 (application ref: 7.17.17.4)**). Further geotechnical surveys are currently planned within the Array Areas during 2024. Although the primary objective of these surveys is to inform engineering design, advice will be obtained from the retained archaeologist, to ensure that archaeological considerations are taken into account in accordance with **Volume 8, Outline WSI (Offshore) (application ref: 8.22)**.
Section 2.1 (Marine Physical Processes) – it is our advice that changes, as proposed by this project arising from 'construction' should be considered as likely to give rise to significant impacts on seabed features and morphology. In reference to the explanation provided about mitigation (section 1.7.2.4) it is a relevant matter that the applicant demonstrates a "commitment" to conduct geophysical, geotechnical survey and other seabed intrusive investigations, as part of the preparation of any Environmental Statement (ES) produced for this proposed project.	The effects of construction upon marine physical processes are discussed in **Volume 7, Chapter 8 Marine Physical Environment (application ref: 7.8)**. Geotechnical survey data acquired in 2022 and 2023 have been subject to geoarchaeological assessment and input into the planning of these surveys was provided by a specialist marine geoarchaeologist. Geophysical data have been acquired and been assessed by Wessex Archaeology and the full assessment results inform the ES.
"Do you agree with the characterisation of the existing environment?" The text provides a general description of the area in which these developments are proposed, but such limited detail cannot be considered to offer "characterisation". In reference to figure 2-24 we noted in the key "Historic Wreck", but it was not possible to identify such features in the figure due to the density of other symbology. We also offer the comment that careful consideration should be given to the use of the term "historic wreck" and that attention should be given to how heritage assets (whether designated or not designated) are addressed through the UK Marine Policy Statement and the subsequently published Marine Plan policy for cultural heritage.	A full desk-based assessment of the existing environment for Offshore Archaeology and Cultural Heritage is provided in section 17.5 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**. The National Policy Statements (NPS), UK Marine Policy Statement and the published Marine Plan policy for cultural heritage have been taken into account in establishing the existing environment.
"Do you agree with the approach to data collection?"	Geotechnical surveys to date have been subject to geoarchaeological assessment, including input into planning the surveys from a specialist marine geoarchaeologist. Geotechnical surveys within the array areas are planned for

Comment	Project Response
Table 2-33 (Site-Specific Data) only offers some certainty that geophysical survey will be conducted (as described in paragraph 486), but we recommend that to attempt to characterise the areas subject to these proposed developments, it is relevant that geotechnical investigations are commissioned and conducted as part of any programme of work to prepare an ES. In addition, while we concur that archaeological advice is essential to inform the planning of such surveys (paragraph 487), it is inadequate and likely to be of very limited value to any party to simply mention that "…samples will be made available for geoarchaeological assessment."	2024 and geoarchaeological assessment will be undertaken post-submission. Geophysical data have been acquired and been assessed by Wessex Archaeology and the full assessment results inform the ES.
"Have all the potential impacts on Offshore Archaeology and Cultural Heritage resulting from the Projects been identified in the Scoping Report?" Theoretical impacts based on a multitude of possible engineering designs for these proposed developments appear to have been outlined, as relevant to the preparation of an EIA Scoping report. For example, section 2.13.3 (Potential Impacts), paragraph 490, highlights an important matter regarding how impacts may occur if heritage assets are located, or otherwise discovered, within the footprint of the proposed developments and / or from construction activities such as seabed clearance and anchoring.	Noted.
"Do you agree with the impacts that have been scoped in (or scoped out) of further assessment?" We concur that all potential impacts during anticipated phases of construction, operation and maintenance and decommissioning operations are scoped in (as explained within sections 2.13.3.1 to 2.13.3.3). We also concur that potential cumulative impacts (section 2.13.3.4) and potential direct transboundary impacts (section 2.13.3.5) are both scoped in.	Noted.
"Do you agree with the proposed approach to assessment?" In reference to the summary of possible impacts that are scoped in (as summarised in Table 2-34), it is our advice that the strategy of mitigation (as mentioned in paragraph 515) is expanded to include dealing with situations whereby avoidance is not possible, such as tolerances for micro-siting / positioning given the range of foundation designs under consideration. Subsequent stages of preparing the DCO application for these proposed projects should therefore include the preparation of an accompanying (outline) archaeological Written Scheme of Investigation to detail the methodological approach and techniques to be employed for high-resolution survey and possible intrusive investigation and recovery. It is also relevant that the ES explains the methodological approach which underpins an effective mitigation programme based on geo-archaeological processing of survey data. It is therefore important that research questions are included as informed by the North Sea Prehistory Research and Management Framework (H. Peeters *et al.* 2009) and People and the Sea: a maritime archaeological research agenda for England (J. Ransley *et al.* 2013).	Additional mitigation measures detailed in the impact assessment (section 17.6 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**) comprise: • Geoarchaeological assessment; • Archaeological assessment of further geophysical data to be acquired post-consent; • Refinement of the design of offshore infrastructure post consent to avoid Archaeological Exclusion Zones (AEZs) and additional geophysical anomalies of potential archaeological interest (where possible); • Further investigation where avoidance is not possible and additional mitigation to reduce or offset impacts should impacts be unavoidable; and • Implementation of a protocol for archaeological discoveries to address unexpected discoveries which might be encountered during the course of planned activities. The Applicants' proposed approach to the delivery of this additional mitigation, post-consent, and how the outcomes of additional investigation will influence the final design of the Projects, is set out in **Volume 8, Outline WSI (Offshore) (application ref: 8.22)** which has been prepared in accordance with industry

Comment	Project Response
	good practice guidance on Archaeological WSIs (The Crown Estate, 2021) and which accompanies the ES and DCO application. This includes reference to current, relevant research agendas.
The following references should also be used to inform the subsequent stages of preparing a Preliminary Environmental Information Report and eventual ES: • Archaeological Written Schemes of Investigation for Offshore Wind Farm Projects, published by The Crown Estate (2021); • Protocol for Archaeological Discoveries: Offshore Renewables Projects, published by The Crown Estate (2014); and • Offshore Geotechnical Investigations and Historic Environment Analysis: Guidance for the Renewable Energy Sector, published by COWRIE (2011).	References are included at the end of the chapter.
Section 2.14 (Seascape, Landscape and Visual Impact) – paragraph 520 and Figure 5-25, explain and show the distribution of offshore wind farm developments (at various stages of planning and delivery). It is therefore an important matter that the attention given to the historic environment (as alluded to in paragraph 521) cross-references with the assessment of Historic Seascape Characterisation (as mentioned briefly in 2.13.3.1, paragraph 496). However, we consider the matter that requires assessment in the ES is the constructed presence of offshore wind farms (as described in section 1.4.1.2) rather than the "potential for temporary impacts to the setting" associated with the presence of vessels during the construction phase(s).	Potential changes to the historic seascape character are outlined in section 17.5.4 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**.
It is important to take account of the methodological approach for determining historic character, which is based on perception and is not necessarily dependent on consideration of visibility. The key fact is how disparate data allows for consideration of perceptions of character based on different activities and environmental change over time and how such definable characteristics (in different dimensions) can accommodate change. It therefore seems that the position adopted, for example, Section 2.14.3.2 (Potential impacts during operation), paragraph 526 and 2.14.3.4 (Potential cumulative impacts), paragraph 530 and summarised in Table 2-35, will not allow for a full assessment of how seascape is perceived and how proposed changes can be accommodated, as a component part of any ES subsequently produced.	Potential changes to the historic seascape character are outlined in section 17.5.4 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**.
Historic Environment ETG (Pre-PEIR) 19/01/2023	
Questions on the resolution and amount of acquired survey data, the adoption of a 'selective' approach to data assessment and omission of these results from the PEIR.	Due to the significant amount of high resolution, raw geophysical data across the large project areas, an approach was proposed for geophysical assessment within the array area, to look at all data but not all in raw format (as detailed in section 17.4.1.2 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**). The approach alternatively uses high frequency sidescan sonar mosaics to identify anomalies rather than processing all raw data, alongside the multibeam bathymetry and mag. Although the results

Comment	Project Response
	were not available at PEIR stage, the results were discussed at subsequent ETG meetings (on 10/05/2023 and 20/09/2023) and the Wessex Archaeology technical report was provided for review to Historic England in advance of the ES.
Queried if a method statement would be produced for the 2023 geotechnical survey.	A method statement (MEMO NO: 004779441-01) setting out the approach to geoarchaeological assessment was drafted to provide confidence to Historic England that geoarchaeological objectives were appropriately considered in planning geotechnical surveys for the Projects. The note was discussed at the ETG meeting on 10/05/2023 (detailed below).
Historic Environment ETG (approach to offshore geophysical and geoarchaeological assessment) 10/05/2023	
Can the raw sidescan sonar data be used where new sites have been identified to attain more detail on these areas?	Time was allowed to revisit selected sites and review the raw data where additional detail was required (as detailed in section 17.4.1.2 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**).
The UKHO data shows patterns or clusters of features which could constrain construction.	Most of the 'clustered' features recorded are anomalies associated with geophysical assessments for other projects in the area rather than confirmed archaeological features (e.g. debris, natural features and boulders) (section 17.5.2 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**).
The more that can be done now to identify where it will be tricky to navigate a cable through now, the better.	The geophysical contractors contact list was used alongside archaeological assessment to facilitate the identification of boulder fields, and screen out natural features. This allowed the specialists to focus on the anomalies more likely to be of anthropogenic original and possible archaeological interest. The aim was to provide a suitable characterisation for EIA from large amounts of data without needing to 'mine' the entire dataset.
Queried if any of the results are presented in the PEIR.	Although the assessment was underway at the time the PEIR was published the results were not available at that time. The results have been presented in full in the ES (section 17.5.2 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**). The results were presented in the ETG meeting on 20/09/2023 and the Wessex Archaeology technical report was provided for review to Historic England in advance of the ES.
Queried if further post-consent geotechnical investigations were planned.	Further geotechnical works are planned during 2024 and will be followed by further investigations post-consent. Wessex Archaeology are also assessing sub-bottom profiler data acquired for the projects and this will be used to inform planning for further surveys where appropriate, should specific palaeolandscapes features require ground truthing, for example.
PEIR Consultation, Historic England 17/07/23	

Comment	Project Response
Due to the timing of the PEIR submission we note that the latest draft of the National Policy Statements EN-1, EN-3 and EN-5 (dated to March 2023) could not be utilised, with the early iterations dating to 2021 included only. However, we are pleased to see that the March 2023 drafts will be reviewed and incorporated into the final Environmental Statement (ES) (Chapter 3 - Policy and Legislation, para. 80).	The March 2023 drafts have been reviewed and incorporated into Table 17-4 (**Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**)accordingly.
In addition, we request where updates are carried out with regard to relevant policy, with respect to intertidal remains (or even those in the nearshore area), the East Riding Local Plan Policy, ENV3: Valuing our heritage, be considered also.	The East Riding Local Plan Policy, ENV3: Valuing our heritage has been listed as an additional relevant policy in section 17.4.1 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**. Policy ENV3: Valuing our heritage is also included in Table 1-2 of **Volume 7, Chapter 3 Policy and Legislative Context (application ref: 7.3)**.
Prior to submission (but after the Scoping consultation) the Applicant clarified that only the marine geotechnical data acquired from the Offshore Development Area in 2022 would be integrated for the PEIR characterisation (communicated through the ETG meetings (para. 92)). As the marine geophysical survey data - in the form of sidescan sonar, multibeam bathymetry, sub-bottom profiling and magnetometer - was yet to be assessed and interpreted by an archaeological contractor. In doing so we acknowledge this approach, noting the specific processes the archaeological geophysicists were working to, and how the survey findings will be integrated more broadly into an updated ES Chapter 8 – Marine Physical Environment (Chapter 8, para. 33).	Noted.
We do however feel that such an approach is not without risks given it presents additional pressures on explaining and understanding development impacts - typically made apparent at this stage - to that at the formal application. Furthermore, it is applying an approach that is relatively untested, which may place an emphasis toward larger sites and features, outwith of a greater seabed landscape perspective, and perhaps applying less consideration of outlying or relatively isolated smaller anomalies against considerations into site specific bedforms.	This risk is acknowledged and further clarification on the nature of this risk has been provided through the ETG meetings (10/05/2023 and 20/09/2023) and in the ES (section 17.4.7 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**). The approach is considered suitable for the characterisation of offshore archaeology and cultural heritage for EIA purposes across these large areas, on the basis that only a small percentage of the seabed within the project areas will be taken forward for development following refinement of the design. Project layouts will be designed taking account of the distribution of archaeological features and the commitment to micro-siting where possible and this refined area will be subject to full archaeological assessment post-consent. This commitment is captured in **Volume 8, Outline WSI (Offshore) (application ref: 8.22)** submitted alongside the ES and DCO application.
Moreover, although as experienced curators that are used to assessing development impacts (risk), managing uncertainty and newly discovered heritage assets, from the perspective of the EIA process it at present reduces accuracy in how the Cultural Heritage Impact Assessment functions against set principles (see IEMA, IHBC and CIfA, 2021 Principles of Cultural Heritage Impact Assessment in the UK).	A precautionary approach has been applied in assessing impacts against the worst case scenario (section 17.6 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**). This assumes that, if any seabed features (known or potential) are directly impacted, key elements of an asset's fabric and / or setting could be lost or fundamentally altered, such that the asset's heritage significance is lost or severely compromised. The need for further investigation to reduce uncertainty, once project layouts have been refined, is a fundamental principal of the approach to site investigations post-consent. The commitment to further investigation, and

Comment	Project Response
	the approach to mitigation, is set out in **Volume 8, Outline WSI (Offshore) (application ref: 8.22)** submitted alongside the ES and DCO application.
With regard to how the individual components and impacts are assessed we found it difficult to determine consistent use of specific measurements/dimensions/area extent between Chapter 17's Table 17-2 'Realistic Worst Case Design Parameters' and those in Chapter 5 – Project Description. Could the Table be checked for accuracy and consistency please?	The Realistic Worst Case Design Parameters have been updated in Table 17-1 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**.
In paragraph 27 it is stated that "the avoidance of AEZs, and features of possible archaeological interest, has not been embedded in the design of the wind farm boundaries or offshore cable corridors to date (over and above the requirement to avoid historic wrecks as far as possible as a principal of site selection). However, the parameters of the Projects are sufficiently wide to accommodate micro-siting as part of the cable route refinement and wind farm design (which will be progressed post consent)". As such we understand this is in part related to the fact marine geophysical survey data has yet to be integrated into the early project planning stage. Additionally, however, we would like to have it clarified if the present Offshore Development Area buffers for the export cables are going to be revised or amended in any way at the ES stage? The reason being is that they appear to be of an approximate width of 250m (within the supporting figures (17-1a to 1e)), which if all six export cables are to be utilised does appear to leave limited buffer coverage to account for impact close to the edge of the focus of the Offshore Development Area and surrounding seabed.	The cable corridors assessed for the PEIR were 2km in width with a 4km landfall. The routes have been refined with the removal of route options and a reduced landfall area, although the corridors taken forward to the ES remain 2km wide across the majority of their length, including a construction buffer.
We are pleased to see that the setting of marine heritage assets have been considered, including how they may be experienced, with the reference to The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning Note 3 (2nd Ed., Historic England 2017) welcomed. This is because we are of the opinion that where a heritage asset's remains may reside are generally more than just a product of happenstance. Especially when they have performed activities in episodes of armed conflict, or been places and settlements now since lost due to rising sea levels and coastal erosion.	Noted.
We note from paragraph 77 that the initial interpretation of the geotechnical survey undertaken within the DBS Array Areas in 2022 may be subject to change pending further geotechnical surveys. Is this also the case for the inclusion of sub-bottom survey data as part of this wider assessment? Building toward an effective and as accurate as possible deposit model? We further request that all such proposed work should take care to consider the recently updated North Sea Prehistory Research and Management Framework (https://researchframeworks.org/nsprmf/).	The preliminary deposit model included in the PEIR has been updated with the results of the assessment of sub-bottom-profiler data and geoarchaeological assessment (section 17.5.1, Table 17-9 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**). All further investigation and analysis will take account of the recently updated North Sea Prehistory Research and Management Framework in defining the scope and setting objectives for each stage of work as captured in **Volume 8, Outline WSI (Offshore) (application ref: 8.22)** submitted alongside the ES and DCO application.
We would also recommend that the geoarchaeologists are involved in the planning of future geotechnical surveys, to account for the need of specific techniques of scientific dating for instance. Whilst also being allowed direct access to all cores acquired as it is better to record and assess continuous core sequences rather than isolated deposits as this allows for greater reliability and confidence in the resulting conclusions.	These recommendations were captured in the approach to the geoarchaeological assessment of geotechnical data set out in a geoarchaeological method statement issued to Historic England on 04/05/2023, and discussed in the ETG meeting on 10/05/2023. The

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	recommendations are also included in **Volume 8, Outline WSI (Offshore) (application ref: 8.22)** submitted alongside the ES and DCO application which sets out the approach to geoarchaeological assessment post-application/post-consent.
For the benefit of consistency section 17.4.7 'Assumptions and Limitations' should incorporate detail on the approach taken toward marine geophysical survey data processing, assessment and interpretation. In particular at the ES stage.	Further consideration of the limitations of the approach to the archaeological assessment of geophysical data have been included in the ES (section 17.4.7 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**).
Section 17.5.2.3 'Importance of Heritage Assets' – as alluded to within the Marine Policy Statement 2011 and outlined in relevant Historic England revised 2017 guidance (Ships and Boats: Prehistory to Present – Selection Guide) there is the potential for instances where a vessel's importance may be strengthened by an association with other vessels of a similar type. Or a wider spatial context which reflects their broader functional use or purpose, can also contribute to the story of a seascape and distinctive identity. Therefore, the importance of the wreck SS Feltre may be enhanced as additional elements, sites and objects are discovered through planned pre-construction survey work.	Noted. Additional clarification has been added to section 17.5.2.3 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**. The relevance of 'group value' is also a consideration of CEA in section 17.8 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**.
What is more, the marine environment is also unique in that the majority of the individual heritage assets that reside within it, such as ships and aircraft remains' - due to their transient nature - retain stories of the crew, vessel construction, trade, immigration, emigration and conflict. These individual elements therefore have the potential to also link numerous geographical locations, both on land and at sea. Shipwreck sites in particular hold a degree of significance in many ways, to many places.	Noted.
In addition, we do however accept PEI has acknowledged that the cultural significance of sites or objects yet to be discovered may be clearer when further examined post-consent (e.g. through ground-truthing investigations) by Remotely Operated Vehicles (ROV) and / or diver surveys. Which can attain greater understanding as to the character, nature and extent, and preservation of selected features – to enable their cultural significance to be better described to inform any requirements for further work on a case by case basis (para. 183).	Noted.
Adding to this important point we would however state that when establishing AEZs for maritime and aviation heritage assets, their specific tolerances to change (within the environment they are situated) can vary, and it is not always possible to measure or account for such factors without appropriate survey and investigative data – whilst also balancing adequate seabed space for the development. Consequently, understanding the significance of individual heritage assets (where possible) and the potential ensuing development impacts depends on how detailed the provision to attain targeted information can be from the outset; incorporating archaeological advice. The individual AEZs that are then implemented are done so to work as effectively and proportionately as possible during construction, operation and decommissioning. With the provision of post-construction monitoring that follows, utilising acquired high resolution acoustic images in which to determine change against the previously recorded baseline conditions, for instance in relation to the impacts potentially caused by changes to bedload sediment transport and seabed morphology (Impact 04) (Chapter 8 – Marine Physical Environment).	Noted. The approach to establishing and monitoring AEZs has been set out in **Volume 8, Outline WSI (Offshore) (application ref: 8.22)** submitted alongside the ES and DCO application.

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12. It is noted that Section 17.5.4 'Historic Seascape Character' provides a table (Table 17-15 'Summary of Historic Seascape Character Types') – which summarises the character types – such as fishing, military and industry, etc. – with a qualification of perceptions of change. As such we note this was carried out in clear reference to the consolidated national Historic Seascape Character GIS dataset (para. 150).	Noted with thanks.
As a specific comment - How close is the planned Offshore Development Area export cable route from the recorded position of the HMS Falmouth? And have any potentially associated remains been observed within the 2022 marine geophysical survey data?	HMS *Falmouth* is located approximately 1125m to the south-east of the cable corridor. No potential associated remains have been observed within the 2022 marine geophysical data.
The attention paid to how to engage with local communities made in Section 17.5.5 'Future Trends' (specifically para. 157) is also welcome. As such it would be further welcomed if this could be elaborated on, with regard to beneficial effects from the development (draft EN-3, para. 3.8.191, March 2023). Thereby raising awareness of particular discoveries, or new evidence where possible, that is very much educational as well as topical. For instance, especially where medieval remains may have been recorded nearshore, or where ancient landscapes may have been mapped and interpreted, revealing evidence of past abrupt climatic changes, that have been picked up in the development surveys and analysis – all in conjunction with the infrastructure drive to decarbonise.	Depending upon the significance of the results of the archaeological assessments, consideration will be given to implementing a progamme of public outreach and community engagement (see section 10.4 of **Volume 8, Outline WSI (Offshore) (application ref: 8.22)**).
Therefore, any such discoveries are likely to be of interest to the public and provide excellent opportunities to engage effectively with local communities through outreach and educational programmes. Additionally due to the scale of the project proposed spanning both on and offshore, there could be the potential to bring about opportunities to understand a broader collective understanding of heritage, be it prehistory or military remains for instance, which could be drawn upon and expressed for communities and the broader region to learn about.	A commitment to exploring opportunities for community engagement which is integrated with the proposed progamme of public outreach for onshore archaeology, as set out in **Volume 8, Outline WSI (Onshore) (application ref: 8.14)**, and is included in section 10.4 of the **Volume 8, Outline WSI (Offshore) (application ref: 8.22)**
As detailed within paragraph 134, there are records for towns lost along the Holderness Coast due to sustained coastal erosion. In respect to identifying this potential prior to impact, such as those indicated in para. 190, it is worth noting that nearshore access for survey vessels may not be able to incorporate techniques conducive to the recording of objects on the seabed that may relate to this potential. Therefore, as para. 286 details, when the final design and layouts are confirmed discussion with local experts and your marine archaeological contractor, the local authority and Historic England will be important in addressing such potential.	Noted. Requirements for further investigation are set out in **Volume 8, Outline WSI (Offshore) (application ref: 8.22)** submitted alongside the ES and DCO application.
Furthermore, whilst more modern wreck sites may not hold value or interest as reflected in Historic England's Conservation Principles: For the Sustainable Management of the Historic Environment (Consultation Draft, 2017), they perhaps may in time. And it is likely due to the circumstances of their loss they would retain emotive and sensitive attachments to people and coastal communities. Ideally, also, the ES should make reference to the above document for clarity.	Noted. Reference has been added to the Conservation Principles document in the ES.
Paragraph 184 sets out that the approach to the implementation of all mitigation measures will be set out in an Outline WSI (Offshore), to be submitted alongside the ES and DCO application. And be prepared in accordance with industry standards and guidance including Archaeological Written Schemes of Investigation for Offshore Wind Farm Projects (The Crown Estate, 2021). As such we welcome this	**Volume 8, Outline WSI (Offshore) (application ref: 8.22)** covers both Projects (DBS East and DBS West). However, DBS East and DBS West will have separate deemed marine licences and, therefore, separate obligations to provide detailed

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commitment, as we feel its clear inclusion with the DMLs attached to any DCO will enable it to function effectively, throughout the duration of the two projects. We do however request clarification that both DBS West and DBS East will have separate project WSIs?	offshore WSIs (post-consent) which should be prepared in accordance with the Outline WSI (Offshore) which covers both Projects.
With regard to the content of the WSI. In order to fully account for impacts to heritage assets discovered in the pre-construction planning and clearance work that pose a development constraint, the offshore Outline WSI should consider in greater detail the appropriate mechanisms to ensure effective archaeological work is supported through a phased approach. Furthermore, should the remains investigated under such provisions prove to be of possible national importance - an extension of the period of time available must be afforded for a more detailed evaluation, in doing so this will enable a clearer understanding of their significance and likely extent. The results would therefore inform where a need to potentially preserve such remains in situ is necessary (through a revised engineering design where feasible), or allow a period commensurate with the construction timetable, for archaeological works in accordance with Chartered Institute for Archaeologists (CIfA) standards and guidance, and other relevant expert advice.	Noted. The phased approach to investigation is detailed in **Volume 8, Outline WSI (Offshore) (application ref: 8.22)** including provision for sufficient time to allow for investigation should remains of possible national importance be identified. The presumption will be in favour of avoidance, although it is recognised that there may be occasions where a proportionate evaluation may be required to inform the nature and extent of an AEZ, for example. When avoidance is not possible then a programme of further investigation would be agreed by in consultation with Historic England and in accordance with a final, agreed WSI and accompanying method statements (as set out in **Volume 8, Outline WSI (Offshore) (application ref: 8.22)**.
Furthermore, ideally a recommended strategy for heritage assets (such as artefacts, structure, deposits of archaeological interest) encountered early on in the design planning phase - that are potentially likely to be impacted or pose a constraint - should be considered a priority to limit delay in carrying out necessary archaeological work. This is to account for discrete and sensitive remains and deposits, so that they can be protected and/or sampled in a timely manner in order to mitigate any damage, degradation or the potential loss of the remains – such as outcropping palaeolandscape deposits and features.	Noted. This is captured in **Volume 8, Outline WSI (Offshore) (application ref: 8.22)**.
Should you and/or your archaeological contractor be considering utilising the strategy of an offshore Watching Brief, we recommend that this is captured within the WSI in accordance with the standards and principles outlined by the CIfA (CIfA, Standard and Guidance for an Archaeological Watching Brief (2014, updated 2020)).	Noted. This is captured in **Volume 8, Outline WSI (Offshore) (application ref: 8.22)**.
Historic Environment ETG (approach to offshore geophysical and geoarchaeological assessment) 20/09/2023	
Attention drawn to excavations at the landfall (onshore) and overall interest in high levels of erosion (and hence potential for 'terrestrial' archaeology) in the intertidal and nearshore area.	Excavations have revealed substantial evidence for Iron Age and Roman settlement activity and medieval archaeology. Account has been taken of this work in the offshore chapter (section 17.5.3 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)**) due to the erosion of terrestrial deposits and potential for associated finds in the intertidal and nearshore area.
Query regarding if any of the 'new' wrecks identified within the array areas have corresponding magnetic anomalies.	All of the previously unidentified wrecks seen in the geophysical data from the study area have got magnetic signatures associated suggesting they presence of ferrous material in their construction. These new wrecks are described in section 17.5.2 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)** (Table 17-13).
Attention drawn to a need for collaboration between projects and sharing of data.	A commitment to data sharing and integration with wider assessments and research initiatives is set out in the CEA (section 17.8 of **Volume 7, Chapter 17**

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	offshore Archaeological and Cultural Heritage (application ref: 7.17) and **Volume 8, Outline WSI (Offshore) (application ref: 8.22)** submitted alongside the ES and DCO application.
Historic Environment ETG (results of offshore geophysical and geoarchaeological assessment and approach to WSI) 14/12/2023	
The archaeological assessment report authored by Wessex Archaeology was provided to Historic England prior to the meeting. Historic England confirmed that a formal response would be provided following the meeting.	The Applicants' response to Historic England's comments on the assessment report (**Volume 7, Appendix 17-2 (application ref: 7.17.17.2)**) is provided below.
Historic England requested that, while they have no major concerns on the 'proportionate' approach, sufficient detail would need to be provided in the ES on why the approach was selected.	The reasons for the selection of a 'proportionate' approach are detailed in section 17.4.2.1.1 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)** and consideration of the limitations of the approach is provided in section 17.4.7.
Historic England acknowledged the project scale and the vast amount of data and that the proportionate approach provides a reasonable idea of what might be out there which would be backed up, and the approach tested, by subsequent high resolution assessment. Post consent ground truthing will also help pull together and verify the results.	The approach to further survey and assessment of marine geophysical data and to ground-truthing is set out in sections 5.2 and section 5.3.5.4 of **Volume 8, Outline WSI (Offshore) (application ref: 8.22)** respectively.
With respect to geoarchaeological assessment, as only one sample of interest has been retained to date, Historic England agreed that they were content that the next stage of assessment and analysis could be postponed and taken forward in line with the next phase of geotechnical survey and that they would be happy to wait until DCO to review the supporting documents.	The results of the assessment undertaken to date (Stage 1 review of geotechnical logs) are set out in (**Volume 7, Appendix 17-4 (application ref: 7.17.17.4)**. The report includes recommendations for further assessment aligned with further phases of geotechnical survey. The approach to further geoarchaeological assessment is set out in section 5.2 of **Volume 8, Outline WSI (Offshore) (application ref: 8.22)**.
Historic England raised a query regarding any success in incorporating data from adjacent projects for CEA.	Only data available within the public domain has been captured in the CEA (section 17.8). A commitment to data sharing and integration with wider assessments and research initiatives is set out in the CEA (section 17.8 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)** and **Volume 8, Outline WSI (Offshore) (application ref: 8.22)** submitted alongside the ES and DCO application.
The approach to the WSI was discussed and Historic England confirmed that they would be happy to wait until DCO to review document.	**Volume 8, Outline WSI (Offshore) (application ref: 8.22)** has been prepared in accordance with industry good practice guidance on Archaeological WSIs (The Crown Estate, 2021) and accompanies the ES and DCO application.
Historic England response to consultation request on Dogger Bank South OWF Archaeological Assessment of Geophysical Data for EIA Archaeological assessment of 2022 Marine Geophysical Data (Doc ref 255980.0 Issue 3, Nov 2023), by Wessex Archaeology (19/12/2023)	
Throughout the report reference is made to blocks used to delineate survey locations (e.g. Blocks 1-23 and Blocks B, C, E, F). However, there are areas of the report where such references would benefit from a supporting figure to illustrate these areas clearly within the context of the wider development.	Amended in **Volume 7, Appendix 17-2 (application ref: 7.17.17.2)**.

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Within paragraph 2.3.8 it is stated that "Any magnetic anomalies below 20 nT have been excluded based on ground-truthing information from similar large scale sites". Can it be explained whether this is typically applied to isolated anomalies only?	The 20nT limit was applied across all anomalies. This has been clarified in paragraph 2.3.8 of **Volume 7, Appendix 17-2 (application ref: 7.17.17.2)**.
Paragraph 2.3.11 states that sidescan sonar (SSS) mosaics "were not produced by Wessex Archaeology to assess the quality of the sonar towfish positioning; the client-provided mosaic was used to finalise all SSS anomaly positioning". Given the dual approach taken, was the level of confidence in such positions incorporated into the conclusions given in section 2.4 'Geophysical data – data quality', in general terms, on the basis of the survey Block, for instance?	It is standard practice for a mosaic of the SSS to be produced during this process to assess the quality of the sonar towfish positioning. This process allows the position of anomalies to be checked between different survey lines and for the positioning to be further refined if necessary. For the Projects, the mosaics had already been created and provided by the Applicants and these were used to finalise the positioning of anomalies from the raw SSS data. This has been clarified in paragraph 2.3.12 of **Volume 7, Appendix 17-2 (application ref: 7.17.17.2)**.
We acknowledge that whilst the SSS, multibeam echosounder (MBES) and magnetometer (Mag.) datasets were generally prioritised across the proposed marine development area, due to the risk of entangling with fishing gear in Blocks A and B no towed sensor coverage was completed. With MBES gridded at a higher resolution, specifically in Block B, as part of this assessment. Initially, it would be beneficial if it could be clarified to what size this MBES data was gridded, as it appears to differ between paragraph 2.3.16 and 2.3.23.	The data provided for Block A (Nearshore) was a higher resolution than that provided for Block B. The offshore MBES data were generally gridded at 1 m. However, in Block B the data were gridded to a higher resolution, at 0.5 m, where there was no SSS and Mag coverage, and 0.25m in Block A, again where there was no SSS and Mag coverage. This has been clarified in section 2.3 of **Volume 7, Appendix 17-2 (application ref: 7.17.17.2)**.
In addition, due to the recognised archaeological potential within the nearshore to further offshore area, it would be beneficial for the Environmental Statement (ES) and supporting appendices to explain plans (pre/post-consent) to acquire corroborative survey data at this location. Especially given the need for such data to direct subsequent ground-truthing investigations.	**Volume 8, Outline WSI (Offshore) (application ref: 8.22)** acknowledges data gaps and the need for further survey data, to be acquired post-consent, and assessment of that data. Section 5.1 of **Volume 8, Outline WSI (Offshore) (application ref: 8.22)** recommends that a data review is undertaken, prior to the acquisition of pre-construction geophysical data, in order to clarify the suitability of existing data, confirm data-gaps (in relation to refined layouts, for example) and identify specific objectives to inform the scope of further survey work.
Related to this point is the centrally observed linear gap (2.4.6) within the array data, and as to whether, should this be a location considered necessary for the focus of the development, when such survey data will be similarly acquired and made available for archaeological assessment.	No development would take place within the linear gap without geophysical survey data having been acquired and assessed for archaeological purposes. As above, section 5.1 of **Volume 8, Outline WSI (Offshore) (application ref: 8.22)** recommends that a data review is undertaken, prior to the acquisition of pre-construction geophysical data, in order to clarify the suitability of existing data, confirm data-gaps (in relation to refined layouts, for example) and identify specific objectives to inform the scope of further survey work.
With regard to the SSS data acquired along parts of the export cable route, we note that despite some apparent inclement weather conditions and the clipping of high resolution data (to avoid distortion) the data were considered suitable for archaeological interpretation. It is however worth noting such locations for future reference when planning further surveys, especially where there may be a number of (or potential for) challenging seabed constraints.	Noted. As above, section 5.1 of **Volume 8, Outline WSI (Offshore) (application ref: 8.22)** recommends that a data review is undertaken, prior to the acquisition of pre-construction geophysical data, in order to clarify the suitability of existing data, confirm data-gaps (in relation to refined layouts, for example) and identify specific objectives to inform the scope of further survey work.

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Furthermore, to aid with data gaps, enhance sites specific knowledge, and understand the ground conditions more generally, we recommend that the applicant should explore free publicly accessible data from: • UKHO's Admiralty's seabed mapping datasets: https://www.admiralty.co.uk/access-data/seabed-mapping which may contain gridded bathymetry data of the proposed development area. • BGS GeoIndex (offshore) https://www.bgs.ac.uk/map-viewers/geoindexoffshore/ to gather information on the sub-surface seabed stratigraphy, and the potential it may contain at the proposed development location.	Noted.
The results from the survey provide an essential characterisation of features and sites of archaeological interest. Looking ahead, for those prescribed archaeological exclusion zones, it is important that when such locations are factored into the design planning that the developer retain an awareness that such AEZs may not at this stage fully cover the entirety of a site. And that although performing a function of 'embedded mitigation' the AEZ may be subject to some level of refinement and modification as new information becomes apparent.	AEZs recommended on the basis of the pre-consent assessments undertaken to date are detailed in section 6.1 of the **Volume 8, Outline WSI (Offshore) (application ref: 8.22)**. This includes provision for the alteration of existing AEZs and the implementation of new AEZs which may be required as a result of further data assessment or archaeological field evaluation.
Ideally, what is also worth considering is how best to optimise the data that exists to inform a design plan with specific regard to anomalies, features and sites of potential archaeological interest. Whereby utilising the time available ahead of any specific UXO surveys - through clearly defined archaeological ground truthing investigations (with onboard archaeologists) - to attain a greater understanding and reduce uncertainty.	Noted. Section 5.4 of the **Volume 8, Outline WSI (Offshore) (application ref: 8.22)** includes provision for archaeologically led diver or Remote Operated Vehicle surveys should these be warranted.
As a final general comment, it would be helpful for this report and/or the associated ES chapter to clearly explain the rationale for the approach to the survey data assessment. Thereby ensuring transparency in the project's decision making and to inform the Examining Panel, and marine planning process more broadly.	The reasons for the selection of a 'proportionate' approach are detailed in section 17.4.2.1.1 of **Volume 7, Chapter 17 offshore Archaeological and Cultural Heritage (application ref: 7.17)** and consideration of the limitations of the approach is provided in section 17.4.7.
In general, we have no particular concerns with the methodological assessment approach taken by the project. Although fully understanding its benefits or limitations may only become truly clear as the design plan develops, subsequent ground truthing takes place and construction begins.	Noted.
Historic England response to consultation request on Dogger Bank South OWF Geoarcheological Method Statement (Memo No: 005145327-01) 15/04/2024	
It's clear that the project has some large-scale survey plans for 2024, and that your archaeological contractor has had input along the way. Which is good to see. This is most evident in the revised sub-section 'Approach to Delivering Geoarchaeological Objectives'. Which includes detail on how the archaeological assessment of 2022 sub-bottom profiler survey data has potentially captured the need for specifically targeted investigations to confirm the lithostratigraphic units (as outlined in table 1) and associated features of archaeological interest. Given the need for Shelby tubes, to sample the pre-glacial sand unit, we support the consideration to acquire dedicated archaeological cores. In doing so we feel this also reduces the reliance on split cores	Noted.

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(although important in their own right) and any confusion on handling and storage. This is especially due to the sheer number of cores proposed from the 2024 campaign. We therefore look forward to hearing more on the proposals and the interpretations presented as part of the DCO application. And have confirmed to the MMO that we have no objection to the marine licence applications (MLA/2023/00517 & MLA/2023/00508), subject to conditions.	

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