Historic England

PLANNING ACT 2008 (AS AMENDED) – SECTION 88 AND THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES 2010 (AS AMENDED) - RULE 6

APPLICATION BY RAMPION EXTENSION DEVELOPMENT LIMITED FOR AN ORDER GRANTING DEVELOPMENT CONSENT FOR THE RAMPION 2 OFFSHORE WINDFARM PROJECT

APPLICATION REF: EN010177

SUBMISSION DEADLINE: 28/02/2024

WRITTEN REPRESENTATION OF THE HISTORIC BUILDINGS AND MONUMENTS COMMISSION FOR ENGLAND (HISTORIC ENGLAND)

REGISTRATION ID No: 20045343
Interested Party Reference number: RAM2-EIA006

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Summary

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Historic England is the Government's statutory adviser on the historic environment. It is our duty under the National Heritage Act 1983 to secure the preservation and enhancement of the historic environment. This extends to monuments in, on, or under the seabed within the seaward limits of the UK Territorial Sea adjacent to England. Our objective is to ensure that the historic environment generally, and marine and designated heritage assets especially, are fully considered in the determination of this DCO.

We have provided substantive pre-application advice about the scope of environmental assessment and the PEIR. We have also submitted a Relevant Representation (November 2023). The applicant has provided an Environmental Statement with supporting appendices and other documentation with the application. We have considered the information provided in support of the DCO proposal and provide more detailed comments here, expanding on the advice provided in our Relevant Representation.

Historic England do not object in principle to the Proposed Development. However, we have concerns that harm to the historic environment may result from its construction, operations and maintenance, and decommissioning.

Our concerns and requirements can be summarised as follows:

i) Insufficient evaluation has been done in advance of the application for onshore, intertidal and offshore areas. It would therefore be important to secure these works post consent, but pre-construction should consent be granted;

ii) The onshore route selection process was determined without due regard to the potential significant effects on heritage; in the case of chosen route LACR01d, this has a greater impact on Archaeological Notification Areas than the original PEIR and SIR routes. The applicant should therefore demonstrate how they can practicably avoid harm to the historic environment, and clearly and convincingly demonstrate provision for retention of significant archaeological remains in situ where possible;

iii) There is inaccurate assessment of magnitude of impact and significance of effect. We expect the ES to demonstrate an accurate assessment of magnitude, effects, and levels of harm;

iv) The embedded environmental measures do not include convincing and practicable provision to avoid the risk of harm to potentially nationally important archaeological remains. Avoiding harm to nationally important heritage assets should be a primary objective;

v) No marine geotechnical data was acquired to inform production of the Environmental Statement and therefore corroboration is not possible with geophysical data for this area known to be of prehistoric archaeological interest. We also do not agree with the assessment provided regarding the historic character of the proposed marine development area;

vi) The application includes an Outline Marine Written Scheme of Investigation (WSI) as a mitigation action which should inform archaeological assessment of further survey data to be acquired (should consent be obtained) post-consent. However, we are not satisfied by the standard of the Outline Marine

WSI presented and it is our advice that it should not be accepted as a certified document;

vii) The draft DCO includes two (draft) Deemed Marine Licences which include conditions for WSIs. However, the wording requires amendment to ensure implementation in the crucial post-consent and pre-construction phase to adequately inform the planning and engineering design, and delivery of the proposed project;

viii) The Development Consent Order should contain requirements to ensure that appropriate safeguards are in place regarding the historic environment, either known or presently unknown as might be encountered in the delivery of this proposed project;

ix) The ExA should require the applicant to address how they would avoid harm to the historic environment, and clearly and convincingly demonstrate practical provision for retention of archaeological remains in situ; to enable the ExA to weigh residual harm to the historic environment against the benefits of the proposals, as set out in relevant policy;

x) The ExA should require the applicant to seek to enhance or better reveal the significance of identified heritage assets.

We are engaging with the applicant and their heritage consultants regarding the proposal, to see how these matters will be dealt with, and will provide updates as appropriate to the ExA during the course of the examination.

The local authority heritage advisors for West Sussex County Council and the South Downs National Park Authority are the Planning Inspectorate's primary advisors on onshore non-designated heritage assets. However, due to the potential for non-designated heritage assets of archaeological interest to be present which may be demonstrably of equivalent significance to Scheduled Monuments, we will provide comment as appropriate on the issue. Regarding the marine area, as could be subject to this development, Historic England is the primary advisor for any aspect of the historic environment as defined by the Marine and Coastal Access Act 2009, the UK Marine Policy Statement and published English marine plans.

1. Introduction

1.1 This Written Representation sets out the views of Historic England on the proposed Development Consent Order (DCO) application made by Rampion Extension Development (RED) for the proposed Rampion 2 Offshore Wind Farm. We understand from the application documents that the array area for Rampion 2 would be located adjacent to the existing Rampion offshore wind farm (Rampion 1) in the English Channel and located between 13km and 26km off the Sussex Coast with an array area of 160km^2.

1.2 The application explains that the size and capacity of Wind Turbine Generators (WTGs) for the Proposed Development will be determined during the final project design stage i.e. post consent, should permission be obtained and that this Environmental Statement (ES) assess a maximum design scenario for the WTGs as a "worst case" scenario. The ES describes two options:

- 90 "smaller WTG type" (285m blade tip height); and
- 65 "larger WTG type" (325m blade tip height).

1.3 We note that Rampion 1 WTGs have a blade tip height of 140m.

1.4 Electricity cables will connect the WTGs to up to three offshore substations, with interconnectors between the substations and up to export four cables to transfer the High Voltage Alternating Current (HVAC) electricity to a proposed landfall location at Climping (Arun District, West Sussex).

1.5 The submitted application includes an Environmental Statement (ES), dated August 2023, produced to satisfy the requirements of Environmental Impact Assessment (EIA) requirements, under the terms of European Union Directive 2011/92/EU (as amended by Directive 2014/52/EU)) on the assessment of the effects of certain public and private projects on the environment (EIA Directive). The EIA Directive is transposed into English law for Nationally Significant Infrastructure Projects (NSIPs) by The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

1.6 The Historic Buildings and Monuments Commission for England (HBMCE), known as Historic England, is the Government's adviser on all aspects of the historic environment in England including historic buildings and areas, archaeology and historic landscape; and a duty to promote public understanding and enjoyment. Historic England is an executive Non-Departmental Public body sponsored by the Department for Culture, Media and Sport (DCMS) and we answer to Parliament through the Secretary of State DCMS. Our remit in conservation matters intersects with the policy responsibilities of a number of other government departments particularly those with responsibilities for land use planning matters. The National Heritage Act (2002) gave Historic England responsibility for maritime archaeology in the English area of the UK Territorial Sea (i.e. English Inshore Marine Planning Area). We also provide our advice in reference to the provisions for marine planning and licensing as defined by the Marine and Coastal Access Act 2009.

1.7 In our Section 56 Relevant Representation (dated 6th November 2023) we noted that this development has the potential to impact upon the historic environment (onshore and offshore), and that this impact could be significant in relation to a number of heritage receptors and in relation to EIA policy.

2 Comments on Environmental Statement: Volume 2, Chapter 4 - The Proposed Development (Document Reference: 6.2.4) PINS Reference: APP-045

2.1 We note the detail provided regarding the use of a design envelope approach (known as Rochdale Envelope) that should identify key design assumptions, so that the environmental assessment retains flexibility to accommodate further refinement (should the proposed project proceed). Furthermore, we note the explanation that as part of the Rampion 2 design process, a number of embedded environmental measures have been adopted to reduce the potential for environmental impacts and effects with a commitment to implementing these measures in the design of Rampion 2, which should have an operational lifetime of 30 years. It is of interest to note that a minimum turbine spacing at 950m represents the minimum spacing for the Smaller WTG Type and a minimum of 1,130m for larger WTGs (Table 4-2), as this means potential for greater impact on the seabed. In reference to WTG installation, we understand that the vessel likely to be used is a jack-up vessel (JUV) with up to six legs, each taking up an area of 250m^2.

2.2 Paragraph 4.3.16 describes the WTG foundation types that could be used, subject to completion of geotechnical investigations, identification of environmental sensitivities and final WTG design selected. However, it is important to note that more than one type of foundation design could be used which are presently selected, as the type of foundation will have a bearing on impacts:

- monopiles;
- multi-leg foundations with pin piles; and
- multi-leg foundations with suction buckets.

2.3 Paragraph 4.3.18 highlights that final development planning and design will be informed by geophysical and geotechnical surveys conducted before installation. The results of this survey work should inform cable route selection and micro-siting of WTGs in reference to identified debris, boulders, archaeological features, Unexploded Ordnance (UXO) and sediment depth. Paragraph 4.3.26 (and Table 4-5) describe and quantify the use of pre-lay grapnel runs and clearance areas required, which will necessitate the application and adhering to any archaeological reporting protocol developed and agreed for the proposed development.

2.4 Paragraph 4.3.34 explains that the dimensions of monopiles used will depend on the size of the WTG selected, as well as other factors inclusive of ground conditions, although the estimated maximum monopile diameter should be 13.5m with a maximum embedment depth of 60m (i.e. for the larger WTG type). However, if multi-leg foundations with pin piles are selected the maximum diameter should be 4.5m (Table 4-7) and if multi-leg foundations with suction buckets are deployed, the maximum diameter is stated as 15m with 25m seabed penetration. The proposed three offshore substation are described as likely to require either monopile (13.5m maximum diameter) or multi-leg foundations with pin piles (4.5m maximum diameter).

2.5 We note that array cabling between WTGs and offshore substations and interconnector cabling between offshore substations should be buried to 1m. The four electricity export cables are described as requiring burial of 1-1.5m. Paragraph 4.3.53 acknowledges that "…exact routing of the export cables within the offshore cable corridor will be determined during the detailed design of the Proposed

Development…" we appreciate that attention given to consideration of seabed conditions and "environmental sensitivities", which we consider to be inclusive of known and presently unknown elements of the historic environment, as might be revealed by pre-commencement surveys. It is therefore relevant that the attention given to optimising pre-commencement surveys prior to selection of installation technique (e.g. ploughing, jetting, trenching, or a combination of these techniques) best supports archaeological analysis and interpretation to actively inform cable route selection. Determining the proximity of cable installation to features of known or possible archaeological interest is particularly relevant considering the statement in paragraph 4.3.66 that "…approximately 20% of the array cable may require protection measures". Section 4.4 explains that at landfall, between Middleton-on-Sea and Littlehampton (Climping), the export cables are to be Horizontally Directionally Drilled (HDD) from offshore to onshore i.e. under the foreshore (as illustrated in Graphic 4-17 and described in paragraph 4.4.10).

2.6 The overall operation and maintenance strategy, in paragraph 4.8.10, explains that cable surveys and foundation inspections will initially be undertaken approximately every two years. However, if the infrastructure is considered stable then the survey interval may increase. At decommissioning (Section 4.9), we note that all Rampion 2 infrastructure above the seabed, but inclusive of cabling, will be completely removed. Foundations within the seabed such as piles will not be removed due to the depth of embedment. If suction buckets are used, removal might be attempted.

3. Comments on Environmental Statement: Volume 2, Chapter 5 - Approach to the EIA (Document Reference: 6.2.5) PINs Reference: APP-046

3.1 We appreciate that this Nationally Significant Infrastructure Project (NSIP) is subject to an EIA exercise, produced in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, as necessary to support determination of the Development Consent Order (DCO) application. In particular, the ES should explain the predicted likely significant effects (positive and negative) and the scope for avoiding, preventing, reducing, and if possible, offsetting them. We appreciate that this assessment will seek to identify likely significant effects associated with the proposed project during the construction, operation and maintenance, and decommissioning phases. We also note the attention given to the use of a Commitments Register which is to identify environmental measures that should be incorporated into the design and referred to as "embedded environmental measures" or "primary mitigation" such as avoidance strategies.

3.2 Table 5-3 (EPP Meetings held to date), the following errors are identified:

- Evidence Plan Process: Seascape (SLVIA) and Marine Archaeology Expert Topic Group Meeting held on 16/06/2022 was omitted;
- Additional ETG meeting for onshore historic environment and LVIA held on 10/11/2022 – We have no record of attending this meeting;
- Additional ETG meeting for onshore LVIA and Historic Environment on 01/03/2023 was cancelled; and
- Additional ETG meeting for onshore LVIA and Historic Environment on 14/06/2023 was attended by Historic England

4. Comments on Environmental Statement: Volume 2, Chapter 15 - Seascape, landscape, and visual impact assessment (Document Reference: 6.2.15) PINs Reference: APP-056

4.1 Paragraph 15.9.1 we note that the construction of the offshore elements of Rampion 2 have the potential to result in significant effects on the perceived seascape character of Marine Character Areas (MCAs): MCA05, MCA06, MCA07 and MCA08. In particular that MCA08 (South Downs Maritime) is described as "Sensitivity to Change: High".

5. Comments on Environmental Statement: Volume 2, Chapter 16 – Marine Archaeology (Document Reference: 6.1.14) PINs Reference: APP-057

5.1 It is important to note that referral to EN-3 should be to the final version published in November 2023. For example, EN-3 paragraph 2.8.315 sets out that sufficient and adequate mitigation is applicable as much to known wreck (of historic environment interest) as for discoveries that may occur when high resolution surveys are commissioned, should consent be obtained.

5.2 EN-3 Paragraph 5.9.13 (published November 2023) encourages the applicant to "…prepare proposals which can make a positive contribution to the historic environment…" however, the response offered by the Applicant is solely limited to delivery of "embedded mitigation measures" and that if conducted could make a contribution. The Applicant is therefore not demonstrating a proactive attitude in delivering wider understanding about our shared historic environment, as is likely to be encountered in the proposed development area.

5.3 EN-3 Paragraph 5.9.16 (published November 2023) explains that "…retaining the heritage asset, and therefore the ability to record evidence of the asset should not be a factor in deciding whether such loss should be permitted…" However, the Applicant in response only acknowledges action that could be taken to avoid all known marine heritage receptors and does not adequately address the need for archaeological investigations to be completed ahead of development commencing. Investigations are required to ascertain the presence of presently unknown receptors, so that in-situ protection measures are applied accordingly. Therefore, attention is now required regarding the revised text within paragraphs 5.9.19 and 5.9.20 within EN-1 published November 2023. The statement made by the Applicant about reliance on a protocol for discoveries does not provide mitigation, as reflected in the text of published EN-1 regarding prevention of loss occurring. It is crucial that the measures are in place prior to "project works" commencing (as described by the Applicant.

5.4 Paragraph 5.9.21 (EN-1 published November 2023) is focussed on undiscovered heritage assets as might be discovered and the requirement for appropriate procedures for identification and treatment "discovered during construction" therefore a WSI for "construction" phase is required. Furthermore, it seems that the proposed mitigation is not directly aligned with the NPSs (published November 2023). For example, the use of a protocol reporting system only facilitates communication – the damage/destruction will have already occurred and therefore not mitigated.

5.5 Paragraph 16.6.13-14 explains that corroboration between UK Hydrographic Office (UKHO) and the National Record of the Historic Environment (NRHE) records and

geophysical survey data indicate the existence of 28 known wreck sites. However, it is important to highlight that there are an additional 28 recorded vessel losses within the study area which are not associated with an identified shipwreck. Plus, there are "seabed features" which potentially could be correlated with recorded losses identified as anomalies during the archaeological assessment of geophysical data. It is also entirely possible that these anomalies represent previously unknown wrecking events, and which could be of significant archaeological interest (as acknowledged in paragraph 16.6.16). There are also 17 reported losses of aircraft within the study area with all but one crash location occurring during the Second World War. We appreciated the attention given to 20 records classed as fishermen's fasteners recorded by the NRHE (paragraph 16.6.18) and that action has been taken to cross reference to anomalies identified from geophysical survey.

5.6 Paragraph 16.6.20 briefly describes the geophysical data commissioned for this proposed project, which is described as "good" quality and therefore considered suitable for archaeological interpretation. The detail of Table 16-13 is useful in that 30 anomalies of "high" archaeological potential are identified as well as other anomalies considered to be "medium" or "low" potential. However, it is important to make clear that the inclusion of records in paragraph 16.6.22 for known losses, such as *Gerlen* sunk on 19th July 1972 or *Ny Eeasteyr*, sunk on 8th December 1980 are not of historic environment interest and should not be included here. It is also noted that information is included here, such as for MA005, MA0021 and MA0025 which describes what could be a ship's hull, but for which no corresponding UKHO record references are provided. Furthermore, paragraph 16.6.24 seems to suggest that material already identified as boulders or modern debris are included as "low" potential anomalies; such detail should not be included here.

5.7 Paragraph 16.6.27 requires close attention to ensure alignment with national policy. The action to prepare a survey specific method statement should not be prepared "Prior to any works", but there should be a clear commitment and obligation that any such Method Statement is prepared to inform the planning and delivery of a geotechnical survey campaign, as should be conducted "prior to any works". We will therefore provide further comments as to the suitability of the quoted embedded environmental measures, such as C-59, which we understand is reflected through draft DCO deemed Marine Licence conditions.

5.8 We note that paragraph 16.6.36 explains how a prehistoric channel system (Ref: MA3001) of possible archaeological interest identified through the studies conducted for the Rampion 1 development, extends into the Rampion 2 survey area. However, Table 16-14 is described as a "preliminary deposit model" but doesn't appear to include detail as alluded to in paragraph 16.6.41 regarding peat exposures, which could be of significant geo-archaeological interest.

5.9 "Historic Seascape Characterisation" (paragraphs 16.6.43 to 16.6.53), although reference is made to Chapter 15 (Seascape and Landscape) the consideration of "current seascape" requires attention. It is our advice that MCAs should also take account of Seascape Character Assessment (as used in English marine planning), which incorporates cultural characteristics (as defined by the Marine and Coastal Access Act 2009); this is relevant when considering the capacity of seascapes to accommodate change. it is therefore the case that the statement in paragraph 16.6.47 is not directly demonstrated by the detail presented. For example, in ES Chapter 15, MCA08 (South Downs Maritime) is described in reference to Sensitivity to Change as "High". Furthermore, it appears that the focus for describing historic character seems to be primarily based on public perception (paragraph 16.6.50).

However, the use of Historic Seascape Characterisation (HSC) within this chapter should also consider perceptions of change in identified characteristics in reference to what could be introduced by the proposed RED development project.

5.10 We note that the worst-case scenario presented in Table 16-15 is for 65 "larger type WTGs" differs to the assumption made it the Outline WSI (Doc Ref: 7.1.3, Application Ref: APP-235) which is 90 "smaller type WTGs".

5.11 Table 16-16 Embedded environmental measures – we offer the following comments:

- C-57 – the stage of application of the Marine Written Schemes of Investigation (WSI) to be developed in accordance with the Outline WSI must be clearly explained, as well as the methodological approaches to be used for any monitoring and assessment work (vis. EN-1 published November 2023, paragraph 5.9.18);

- C-58 – any offshore geophysical surveys including Unexploded Ordnance (UXO) surveys undertaken during the life of the project should be subject to archaeological review in accordance with an agreed WSI delivered by the Consent Holder's retained professional archaeological advice service;

- C-59 – Offshore geotechnical surveys prior to construction should be undertaken following early discussions with Historic England utilising an Outline WSI which will support production of a geoarchaeological deposit model following available guidance;

- C-60 – Clarification is required whereby any intrusive activities undertaken during the life of the project will be routed and micro-sited to avoid not only heritage receptors identified pre-construction, but in accordance with archaeological assessment procedures set out in a "Marine WSI", should the project encounter presently unknown heritage receptors (vis. risks associated with the maximum design scenario), as confirmed in EN-3 (published November 2023), paragraph 2.8.165.

- C-277 – any post construction monitoring plan, as well as identifying anomalies, areas or sites of archaeological interest and significance, should outline how post-construction monitoring campaigns will be conducted in accordance with a stage-specific WSI to determine direct or indirect impacts to marine heritage receptors.

5.12 Paragraph 16.1.3 details that 30 "high potential" and 22 "medium potential" anomalies have been assigned Archaeological Exclusion Zones (AEZs) and that of the combined total of proposed AEZs, 28 locations are identified known wrecks and obstructions. These wrecks and obstructions have been assigned 100m AEZs and for records for which there is no corroboration with geophysical survey data, "precautionary" 50m radius AEZs are proposed. We are prepared to accept this preliminary approach subject to subsequent higher resolution investigation.

5.13 Paragraph 16.8.4 provides helpful acknowledgement that consideration of "likely significant effects" in EIA terms used in this application is about the impact on the significance of heritage assets inclusive of cumulative, transboundary, inter-related and residual effects. We add that Table 16-17 (Criteria for establishing the level of receptor sensitivity) implies that only *in situ* archaeological finds are of very high/high

sensitivity. An exemption should be made for Palaeolithic finds which are rarely *in situ* but almost always of very high/high sensitivity.

5.14 Table 16-18 (Criteria for magnitude of impact) – it would be helpful if the Applicant could demonstrate how a "major" magnitude of impact using criteria "beneficial" will be achieved through delivery of embedded mitigation measures (e.g. Table 16-16), as explained within EN-1 (November 2023), paragraph 5.9.13.

5.15 Section 16.9 (Assessment of Effects: construction phase) – in reference to removal of sediment containing undisturbed archaeological contexts, we agree with the possible impacts (negative i.e. exposure and positive i.e. burial), but the assumption made in paragraph 16.9.4 that after application of embedded environmental measures the magnitude of impact is considered "negligible" is entirely predicated on effective implementation. It is relevant to highlight EN-1 (published November 2023), paragraph 5.9.16.

5.16 Tables 16-20 to 16-24 – we do not agree with the identification that 30 "High" potential anomalies should be afforded receptor sensitivity (value) of "Medium"; as this determination does not seem to be aligned with consideration afforded to heritage assets as set out in EN-1 (published November 2023), paragraph 5.9.6 and EN-3 (published November 2023), paragraph 2.8.315.

5.17 Paragraph 16.9.54 – we do not agree with the approach adopted by the Applicant for historic characterisation, which we do not see as aligned with available guidance. For example, paragraph 16.9.56 describes the attention given to public perception of seascape, which together with the conclusions offered in Table 16-25 (Changes to HSC) doesn't appear to correlate with the assessment approach detailed in Chapter 15 for MCAs (e.g. MCA08). Furthermore, as there is no published methodological approach to determine sensitivity in relation to HSC, we cannot concur with the appropriateness or accuracy of the determination of significance of residual effect in paragraphs 16.9.62 and 19.9.63.

5.18 Section 16.10 (Assessment of effects: Operation and Maintenance phase) – regarding the assumptions made about the magnitude of impact of maintenance activities relating to Rampion 2 on marine heritage receptors after the embedded environmental measures (Table 16-16), its consideration as "negligible" is again predicated on effective and enforceable implementation of mitigation conditions.

5.19 Tables 16-26 to 16-29 – we do not agree with the identification that 30 "High" potential anomalies should be afforded receptor sensitivity (value) of "Medium"; this determination does not appear to be aligned with consideration afforded to heritage assets as set out in EN-1 (published November 2023), paragraph 5.9.6 and EN-3 (published November 2023), paragraph 2.8.315.

5.20 Changes to HSC as a result of operation and maintenance vessel activities and the presence of the completed wind farm – we do not concur with the conclusions drawn which use HSC to contextualise a regional approach (paragraph 16.10.44) with the statement made in paragraph 16.10.48 that HSC equates to a marine heritage receptor for which an impact can be determined.

5.21 Table 16-30 (Marine heritage receptor changes to the Historic Seascape Characterisation (HSC) (Operation and Maintenance) – consideration of changes in perception appear to be duplicated from consideration of HSC during construction. It also seems that detail could have been added about decommissioning given

estimated length of operational of Rampion 2 e.g. 30 years, by which time there is likely to be character association with renewable energy therefore decommissioning and removal could equate to major change.

5.22 Section 16.12 Assessment of cumulative effects – the text states that the following projects: IFA2; Cross Channel Fibre; and Portsmouth-Ryde BT that the environmental assessments produced for these projects were not available or did not contain marine archaeology impact assessment. However, we provided advice for all three of these development projects, summarised here:

- IFA2 produced a combined marine archaeological desk-based assessment and review of marine survey data (document dated May 2016);
- CrossChannel Fibre Limited Report Identifying Additional Studies included archaeology (document dated March 2020);
- BT Isle of Wight Cable Project MOP & Environmental Assessment included archaeology (document dated May 2014).

5.23 Table 16-35 – We appreciate that "…archaeological input is of paramount importance throughout the life of the project." Furthermore, the assumption that "cumulative significance of effect during the construction phase is not significant, in EIA terms" is predicated on effective implementation and enforcement of consent requirements. It must also be made clear that in instances where archaeological materials are disturbed, damaged and/or destroyed by the development project cannot be subject to "mitigation".

5.24 Paragraph 16.12.14 – although there might not be any "…spatial overlap with aggregate production areas and the Rampion 2 Assessment Boundary" no consideration is given to the impact to the target resource (palaeo-channels) through dredging or restricted access and disturbance from construction of an offshore wind farm. Therefore, the statement made in paragraph 16.12.17 cannot be substantiated.

5.25 Paragraph 16.12.19 – the text states that "No direct cumulative impacts on marine heritage receptors within the Rampion 2 Assessment Boundary are expected; the two wind farms (Rampion 1 and Rampion 2) are in close proximity but do not have spatially overlapping Assessment Boundaries". However, this does not appear to take into account the possible impact to prehistoric landscape features that cross the two development areas.

5.26 Table 16-37 – Embedded mitigation and avoidance of significant impact is only possible if materials are first discovered and left undisturbed in-situ. Therefore, to substantiate what mitigation might be able to deliver, this table necessitates effective implementation of all archaeological led assessments conducted and completed to inform development planning in advance of any commencement of construction related activities.

6. Comments on Environmental Statement: Volume 2, Chapter 25 - Historic Environment (Document Reference: 6.2.25) PINs Reference: APP-066

6.1 Page 5, Baseline Environment: This section notes that "within the proposed DCO Order Limits there are no designated heritage assets", however document 6.4.25.1 (ES Volume 4, Appendix 25.1: Gazetteer of onshore heritage assets, Table 1-1) notes that scheduled monument 1005828 (medieval earthworks E and SE of St Mary's church) is in the DCO Order limit, as is Sullington Conservation Area.

6.2 There are also other scheduled monuments identified in Table 1-1 with a distance of 0km from the DCO Order limit (i.e. directly abutting it); Muntham Court Romano British Site (1005850), Group of four bowl barrows at the Chantry Post (1015713), and also Lyminster and Washington Conservation Areas. The scheduled prehistoric flint mine and part of a round barrow cemetery at Blackpatch (monument 1015880) is also only 5m from the DCO Order limit.

6.3 Given the high potential for further archaeological remains in close proximity to these scheduled monuments, which might therefore fall within the DCO Order Limits, it would be helpful to acknowledge this. This ES section should be updated to reflect the above information.

6.4 Page 6, Likely Significant Effects: This section notes significant residual effects have been identified during the construction phase in relation to nationally important archaeological heritage assets:

- Neolithic flint mining, mortuary and settlement remains (including those related to the prehistoric flint mine at Harrow Hill);
- Bronze Age and early medieval archaeological remains where these may be of national importance, within Zone 2 (South Downs);
- Undated possible enclosures or settlement indicated by geophysical survey (38 1-3, Appendix 25.4: onshore geophysical survey report, ES Volume 4).

6.5 Significant residual effects are also identified on listed building Oakendene Manor (NHLE 1027074) during the operation of Rampion 2, arising due to changes to its setting. We defer here, however, to the relevant Local Authority heritage advisors, as they are the Planning Inspectorate's primary advisors on Listed buildings, conservation areas, and onshore non-designated archaeological assets.

6.6 We have particular concern that consistently throughout the ES, Historic Environment Chapter 25, where levels of magnitude and effects are assessed, that the conclusions of "not significant", or "less than substantial harm" are drawn, despite the medium to high heritage significance of some assets, and adverse effects from construction (for example see 29.5.27, 25.9.140-2, and 25.9.152).

6.7 There seems to be an assumption that if highly significant archaeological deposits are recorded following a methodology outlined in an approved WSI, that this reduces the level of harm (and thereby downgrades the significance of an effect). This is clearly not the case (as demonstrated by para 5.9.6 of Policy EN-1, see section 14 below), as intrusive excavation and recording means harm to the archaeological resource. Preservation by record does not reduce the harm and is not justification for harm; harm of highly significant heritage assets should be a last resort.

6.8 We expect the ES to demonstrate an accurate assessment of magnitude, effects, and levels of harm. Avoiding harm to nationally important heritage assets should be the primary objective, however we are not clear in relation to most of the designated archaeological assets affected, how this would be achieved. We also articulate this point in our comments below, section 6.16.4 and 6.17.

6.9 Page 92, in reference to LACR-01d – we are pleased to see the commitment that a site-specific WSI will be required for archaeological evaluation works (which will be agreed in advance with relevant stakeholders). We noted previously that if extensive evaluation work was not possible ahead of submission, it must be set out within the ES how the project would mitigate for retention of in situ unexpected archaeological remains of national significance. If the archaeological evaluation work is undertaken sufficiently, the risk of unexpected finds should be reduced. It is not made clear, however, how preservation in situ could be achieved, given a potential lack of alternative routes at this stage in the project.

6.10 Pg.111-2, Table 25-14 notes that site surveys were undertaken. We are not clear where the results from the walkover surveys are, and whether they were used in these interpretations. This should be amended to make it clear.

6.11 Pg.118, Table 25-15 notes that the flint mine on Harrow Hill is 630m from DCO limit. This is correct in relation to the boundary of the scheduled area, however we advise that the limits of the flint mine as an archaeological landscape cannot be so easily defined. The archaeological activity here is an extensive landscape that goes beyond the scheduled boundary, and harm to the wider site could have permanent effects at a landscape scale.

6.12 It is disappointing that impacts on Archaeological Notification Areas (ANA) have not been avoided, especially that encompassing Harrow Hill. The ES fails to understand the known and potential prehistoric, Romano-British and Anglo-Saxon remains as a spatio-temporal landscape rather than individual, spatially-defined sites. The ES does not explain how the project would mitigate for retention in situ of unexpected archaeological remains of national significance. Extensive fieldwork will be required within ANAs and we remind the applicant that the majority of the area crossed by LACR-01d should be considered in an equivalent way to a scheduled site.

6.13 The ES needs to demonstrate that detailed consideration has been given as to how to avoid and minimise harm in these areas.

6.14 Pg.138, 25.6.40 – consideration is not given to information missed by geophysics. Geophysics is one form of baseline evidence gathering, but it has limitations on what archaeological data can be identified and is most appropriately applied as part of suite of investigation techniques. The ES needs to detail how the geophysical survey undertaken, so far, will be supported by other techniques of investigation.

6.15 Pg.139, Table 25-19, in reference to Arun floodplain and coastal plain; the potential in relation to Palaeoenvironmental deposits is noted as “low to very high”. This wide range emphasises the need for investigative data to fully understand the archaeological potential of this area.

6.16 Pg 140, Table 25-19, in reference to Intertidal zone KM 00: Buried/submerged prehistoric landscapes are identified as of “regional importance”. We disagree with this assessment. The discovery of significant remains (such as a prehistoric monument; another henge), could be of international significance. In the context of

rising sea levels and intensified storms, the discovery of buried landscapes will become less likely, making the heritage significance medium to high.

6.17 Pages 140 to 188, Table 25-19,20 and 21, All zones – with reference to “geophysical anomalies of unclear origins” for all three zones, we disagree with the levels of heritage signficance proposed, and this highlights the need for ground-truthing of geophysics results.

6.18 We do not think it is possible to decide the heritage significance of areas is very low to medium given it is not clear what the anomalies are, and that the available baseline evidence for certain periods (for example medieval in zone 1 and neolithic in zone 2), suggests there is a high potential. This indicates that a different approach to understanding these anomalies is required, particularly where they may be associated with known ‘receptors’ (heritage assets).

6.19 Pg.158, Table 25-20 – we do not agree with an outcome of low to medium heritage significance for General Chalk Upland Neolithic. Considering the route is going through an ANA, Harrow Hill, and is within such close proximity to scheduled monuments that form part of a wider archaeological landscape, we would expect a high level of heritage significance to be ascribed here.

6.20 Pages 161-5, KM09 to KM13 – with regard to possible extraction pits between TC-10 and TC-12c; it is possible these could these relate to the scheduled Neolithic flint mine. If so, we advise this would raise their level of significance. We recommend more detailed review of these features.

6.21 Page 176, vicinity of KM13.5 and km14.5 – with regard to the undated possible pits, nearby, if related to designated heritage assets nearby, this could raise the level of signficance. We recommend more detailed review of these features.

6.22 Pages 177-9, vicinity of KM16 to 17 TC-15b – circular mound features have been identified at Sullington Hill; if related to designated assets nearby, this would raise their level of signficance. We recommend more detailed review of these features.

6.23 Page 214-5, Table 25-23, C-6 – the Archaeological Notification Areas (ANA) should be included here.

6.24 Table 25-23, in reference to Relevant historic environment embedded environmental measures:

- Page 216, C-11 – we note that soil may be required for retaining archaeological remains in situ;
- Page 216, C-12 – suggested addition; “a professional archaeologist may be required to oversee soil stripping”;
- Page 224-5, C-103 – suggested additions; “such as impacts to buried deposits of archaeological interest”, the geochemistry and hydrology affecting preservation conditions “and changes to setting”; and
- Page 230, C-225 – we welcome this approach, but we are not yet convinced that sufficient archaeological evaluation has been undertaken to be able to avoid such remains, nor by the practicality of a response by changing the proposed route. If newly identified archaeological deposits

were of high heritage signficance they would require an equivalent approach to that of designated heritage assets (scheduled monuments). We note that preservation by record means destruction of the archaeological resource and is not therefore a direct alternative to preservation in situ. This is particularly pertinent for heritage assets of national importance.

6.25 Page 401 Table 25-30 – It is our advice that the summary table of residual effects for the construction phase is misguided and misleading. Embedded environmental measures, such as recording archaeology before any loss, would not reduce harm leading to effects being classified as Not Significant.

6.26 Whilst investigating archaeology at risk of loss or disturbance is essential, and will reduce the loss of knowledge and understanding, it cannot reduce the actual harm (and thereby downgrade the significance of an effect). Harm can be caused directly through excavations or indirectly through increased pressure caused by overlying temporary and permanent loads, and/or geochemical and hydrological changes to the archaeological matrix. These matters are not adequately translated in the table.

6.27 Page 233, in reference to Assessment of Effect, direct effects: effects from construction compounds, the 40m wide corridor, and HGV traffic are not considered here, and should be included.

7 Comments on Volume 4, Appendix 16.1: Marine Archaeological Technical Report (Document Reference: 6.4.16.1) PINs Reference: APP-162

7.1 Section 2.4 (Geophysical data collection and methodology) – the methodology for geophysics should include line spacings and depth of survey, as described in the Geophysical Survey Report (ES Volume 4, Appendix 9.4, Doc Ref: 6.4.9.4, PINs Ref: APP-144), such that isopach charts are produced to show sediment thickness of the upper, loose and any mobile material. Plus, any other significant reflector levels which might impact on the engineering design to 50m below seabed for the proposed array areas and to 10m below seabed for the export cable corridor.

7.2 We are aware that the surveys used techniques inclusive of Multi Beam Echo Sounder (MBES) and Side Scan Sonar (SSS) within the proposed array areas for the offshore part of the export cable corridor. In addition, Sub Bottom Profiler (SBP) and Magnetometer (Mag) data for the offshore part of export cable corridor with a line spacing of 60m, and 4 out of every 5 main lines in array areas, with a line spacing of 77m. The geophysical survey report (as referenced above) also states that Ultra-High Resolution Seismic (UHRS), SBP and Mag data was acquired for the (proposed) array areas at a line spacing of 385m with cross lines spacing of 1,336m which we understand could equate to possible WGT locations.

7.3 Section 2.5 (Methodology geophysical data interpretation) – We note that archaeological assessment of geophysical data was conducted by a qualified and experienced marine archaeologist and that marine geophysics guidance published in 2013[1] was used. However, it is important to note the attention given to line spacings for surveying archaeological remains which are recommended at 30-50m for large (spatial) areas. This guidance should be followed in further surveys and therefore should be clearly referenced in the Outline WSI submitted as part of this DCO application.

[1] English Heritage (2013) *Marine Geophysics Data Acquisition, Processing and Interpretation*

7.4 Section 2.6 (Environmental measures methodology) – We noted the following statement "These will evolve over the development process as the EIA progresses and in response to consultation". However, it seems apparent that there is not a full appreciation that an ES has now been produced and that any progress will be related to work stemming from consent requirements, should permission be obtained, and delivered through the WSI mechanism.

7.5 Paragraph 3.2.2 includes Historic Seascape Character as a "marine archaeological resource"; this is not a resource per se, but an exercise conducted by the Applicant to determine the capacity of perceptions of historic character to accommodate change as proposed by the development.

7.6 We noted the attention given to attributing "significance" to all the desk-based wreck records (e.g. UKHO "Live" records) considered spatially relevant to this proposed development. However, the consideration of "group value" could have contributed to a sense of setting (re HSC) and therefore what change could be introduced by the proposed development. For example, the three wrecks which are described as having "some significance as part of a wider narrative of a particular enemy attack" on 26th July 1940 (wrecks of SS *London Trader*, SS *Broadhurst* and SS *Lulonga*). Furthermore, we appreciate the attention given to unidentified UKHO record records which correspond with geophysical anomalies identified as having the potential to be significant. For example, UKHO Record 19988 (Mulberry harbour bridge unit) of "high overall archaeological significance".

7.7 It is not justified why records such as MFV *Jenny* (sunk 1979); MV *Gerlen* (sunk 1972) or *NY-Eeasteyr* (sunk 1980) are included in this chapter. Furthermore, UKHO 82762 is included as medium significance although could it be a modern vessel.

7.8 The desk-based sources of information and corroboration with geophysical survey results clearly show the concentration of First World War wreck records associated with German U-boat attacks between November 1916 and August 1918 that resulted in the loss of 12 vessels. Overall, therefore it is apparent that this informs and contributes to the historic seascape of this location.

7.9 The attempt to identify "significance" unfortunately moves matters away from considering if the available information indicates the presence of a heritage asset. For example, HMS *Minion* (lost while under tow in 1921) is described as having a good level archaeological potential, but overall "medium" archaeological significance, therefore should be considered as a (non-designated) heritage asset. Furthermore, for UKHO 20020 (tank landing craft), the text states that because the identity and age of this wreck are unknown, it is unclear what archaeological significance it may have. However, this conclusion doesn't seem to draw sufficiently on details already known, whereby if more is learnt that it could be considered of medium to high significant. The conclusion that the identity and age affect the "significance" is not accepted given that available evidence allows for this site to be considered as a heritage asset, as defined by national policy.

7.10 Paragraph 3.3.137 – There are 20 records classed as "fishermen's fasteners" recorded by the NRHE which the text acknowledges could indicate the presence of material of archaeological interest. The investigation of these records should be clearly identified as key locations for subsequent investigation for which the WSI should describe the techniques and methodologies for inspection.

7.11 Figure 7.3 – was produced at a scale that made its use difficult and inconvenient. For example, no attempt was made to make known wreck sites identifiable with only "MA" codes for geophysical anomalies. This same point is applicable to ES Volume 3, Chapter 16: Marine archaeology – Figures (PINs Ref: APP-096).

7.12 Section 3.5 Historic Seascape Characterisation, paragraph 3.5.1 – while appreciate that Historic Seascape Characterisation (HSC) should be used as a means to contextual historic environment information for the proposed development area, it is also the case that a perception of seascape character cannot be destroyed or damaged, but nor can there be "impacts" as there is no available methodology to equate sensitivity to historical character and associated perception.

7.13 Paragraph 3.5.3 – we do not agree that "The historic character of a seascape can be defined by its dynamic nature and ability to accommodate change. Perceptions of the seascape are also dynamic and subjective to the public and time." The implication in this assumption is that dynamic change constantly occurs therefore character constantly changes, therefore there can be no historic character at risk of change. It is also the case that a primary principle for HSC methodology is objectivity and is not specifically tied to the assumed perspectives of the public. The approach advocated here unhelpfully conflates HSC with SLVIA. Furthermore, the losses associated with First World War U boat attacks cannot be considered "dynamic".

7.14 Paragraph 3.5.5 – it is important to add that the HSC methodological approach was developed prior to construction of Rampion 1 Offshore Wind Farm, which was commissioned April 2018. Also, the correct reference is National Historic Seascape Characterisation Consolidation database which provides a geo-spatial database with accompanying guidance.

7.15 Paragraph 3.5.26 – the text provided doesn't appear to consider change due to physical presence of Rampion 1 and 2 and there are assumptions made e.g. regarding navigation that may or not contribute to safer navigation such as marine traffic forced elsewhere and at risk from other hazards.

7.16 Paragraph 3.5.41 – we do not agree with the process of selecting a broad character type to determine change given that all the broad character types contribute to perception of character against which there should be consideration of change as introduced by the proposed Rampion 2 project. We therefore cannot see how conclusions of no change, natural or positive (e.g. "military" as described in paragraphs 3.5.68 to 3.5.72) can be drawn.

7.17 Paragraph 3.5.52 – the conclusion that historical seascape perception of fishing as a deeply ingrained and traditional economic role for many coastal communities is assessed not to change does not appear to be substantiated by the information provided.

7.18 Paragraph 3.5.56 – it is unfortunate that no consideration was given to the change introduced by new industry and associated servicing requirements that is likely to be more than "neutral" in terms of perception of how ports and docks are utilised and redeveloped. Furthermore, there is no logical demonstration of why "coastal infrastructure", "communications", "settlement" or "woodland" were included.

7.19 Paragraph 3.5.58 – the argument made regarding public awareness of historic and recreational dive areas following the identification of wreck locations during "archaeological surveys" is not correct. Archaeological surveys have yet to be

conducted although there is the future potential for "greater understanding, respect and enjoyment of the seascape". Therefore, any conclusion regarding "positive" outcome is directly related to how the development space is managed and public access facilitated together with proactive investment in public information.

7.20 Paragraph 3.5.85 – it is not possible to conclude that Rampion 2, through an increase in research and awareness following archaeological surveys, will produce an "impact" that can be considered to be "positive". The loss of resource and access to in-situ palaeo-environmental evidence will be permanently due to sub-seabed infrastructure that will not be removed, as acknowledged in paragraph 4.3.1 and the acknowledgement of the existence of "complex prehistoric landscapes" and how there will be "direct impact to deposits" (paragraph 5.5.2).

7.21 Paragraph 3.5.88 – the impact of the development on peat is described as positive "thanks to an increase and awareness following archaeological surveys". Whilst "the perception of peat" is unlikely to be impacted by Rampion 2, the preserved organic and minerogenic remains that make up the peat will suffer detrimental impacts. Even after samples of peat have been analysed and palaeo-environmental evidence interpreted, the disturbance or destruction of peat and the release of carbon dioxide cannot be seen as a positive.

7.22 Paragraphs 3.5.96 & 3.5.97 – the claim that no change is determined is not substantiated by the conclusion drawn in Chapter 15 which through the use of "marine character types" has utilised historic character information. Furthermore, the statement that "no significant change in the multiple characters and dimensions of the marine environment as a result of Rampion 2 in isolation or cumulatively with neighbouring developments is identified" cannot be understood or accepted on the basis of the information presented.

7.23 Section 4 Geophysical assessments – Paragraph 4.1.2 – it is correct that all anomalies will be considered throughout the project and Table 4-1 (Summary of archaeological anomalies) and Annex E and F provide important information to inform this project should it progress e.g. the identification of thirty anomalies assessed as "high archaeological potential".

7.24 Paragraphs 4.3.18 and 4.3.29 – highlight the importance of including survey results from Rampion 1 to inform the assessment for Rampion 2, especially the depth of deposits of geoarchaeological interest and correlation with proposed engineering designs for the proposed Rampion 2 development (vis. ES Chapter 1 and WTG foundation designs) or even surface exposed peat deposits as alluded to in paragraph 4.3.19 and Table 4-2.

7.25 Paragraph 4.3.53 – we agree with the focus on sampling peat and understanding its association with the broader onshore and offshore palaeo-landscapes. However, it is clear that the extent of peat across the offshore area is still poorly understood and needs further investigations through geotechnical and geoarchaeological sampling to support the ambition of producing an "outline deposit model" (as mentioned in 4.3.56) using a staged geoarchaeological assessment process as should be explained within an Outline Marine Written Schemes of Investigation.

7.26 Section 5 Mitigation – Paragraph 5.2.2 – on the basis of the information presented we are prepared to accept the proposed use of Archaeological Exclusion Zones (e.g. 100m or 50m radius) in reference to "known marine heritage receptors". However, it is not understood why no attempt was made to qualify the existence of

heritage assets as clearly defined “receptors”, as set out in National Policy Statements, UK Marine Policy Statement and published South Marine Plans. It is important to add that the suitability of 50m AEZ is predicated on the acquisition of high-resolution survey data to fully comprehend the nature of identified wreck complexes (i.e. debris fields), so that spatial extent of AEZ polygons can be employed effectively, as presently illustrated in Figure 7.7.

7.27 Sub-section 5.3 Mitigation (for unlocated marine heritage receptors) – sets out a sensible approach for dealing with presently unknown archaeological materials, as might be encountered by this proposed development at any stage. However, reference to embedded environmental measures (e.g. paragraph 5.3.2) should also embrace the concept of “adaptive” mitigation, whereby archaeological information proactively informs the design of the proposed development (i.e. WTGs and cable routes), as alluded to in sub-section 5.4. We add further that the suggested mitigation for deposits of geoarchaeological potential requires direct acknowledgement that materials are likely to be lost and therefore the crucial point is to agree how that loss of evidence can best be offset (e.g. sampling sites as illustrated in Figure 7.8). Sub-section 5.6 (Mitigation for unexpected archaeological discoveries) gives very cursory attention to employment of an agreed protocol system for archaeological discoveries e.g. as might occur during construction, without acknowledgement of how any such system must be organised and delivered by a professional, accredited and experienced retained archaeological advice service (as mentioned in embedded mitigation measure C-58 and in the Outline Marine Archaeological WSI (Document Ref: 7.9, PINs Ref: APP-235).

8 Comments on Environmental Statement: Volume 4, Appendix 25.3 - Onshore Geoarchaeological and Paleoenvironmental Assessment (report 6.4.25.3) - PINs Reference: APP-202

8.1 We think the desk-based geoarchaeological and palaeoenvironmental assessment report is a good overview of the geology and sedimentology, dividing the onshore study area into three useful landscape zones. It also provides a good summary of the potential for archaeological and palaeoenvironmental remains, both from the types of sediments generally and more specifically from West Sussex. The latter area appears to have far less potential than the rest of the SE of England, but the authors do stress throughout the report that this is most probably a reflection of fewer interventions and lack of research in West Sussex, and we think this raises problems with regard to the interpretation of that data.

8.2 The assessment provides a useful broad-scale vision of the potential for palaeoenvironments. However, since very few boreholes exist along the designated site route, the precise location, depth and thickness of sediments/soils remain unknown as does the level of impact potentially caused by all aspects of proposed works.

8.3 Similarly, the potential impacts from HDD cables on submerged prehistoric landscapes in the intertidal zone remains unknown. A more precise understanding of geomorphological layers will also help to establish the potential for archaeological remains from later periods, their state of preservation as well as potential direct and indirect levels of harm. Further evaluations should include boreholes and/or geoarchaeological test pits monitored and described by a geoarchaeologist.

8.4 Evaluation for Pleistocene and Early Holocene remains (i.e. Palaeolithic and Mesolithic) is inadequate. Such remains rarely consist of earthworks likely to be visible in geophysical, land surface and aerial surveys. Additionally, they are usually deeply buried both onshore and offshore. Relying on the (lack of) HER of finds to predict the potential for such remains is problematic as they are, by default, rare but significant for understanding the early human occupation of Britain.

8.5 Unlike for archaeological periods with higher populations densities and settled communities, absence of evidence cannot be equated to evidence of absence for the Palaeolithic and Mesolithic. The potential for remains from these periods is drawn from the presence of attractive palaeoenvironments, such as raised beaches, buried soils, peat, and palaeochannels and their alluvial plains. These natural deposits have archaeological as well as palaeoenvironmental potential. Application of a suite of survey and investigative techniques is therefore required.

8.6 Page 35, Table 5.1: We are concerned that Table 5.1, which will most likely be used as a summary of the report, is purely based on current findings in West Sussex (hence the surprisingly low potentials).

8.7 The use of 'post-Palaeolithic' is also confusing terminology and could lead to the conclusion that the Neolithic to post-medieval periods are rare in the area. That column refers to sections in Chapter 4 describing 'post-Palaeolithic potential' through geoarchaeological remains, but geoarchaeology is only a method to understand anthropogenic landscapes and behaviour through geology and geomorphology. The terminology is confusing and we are unclear what is meant by Holocene geoarchaeological remains.

8.8 The column on palaeoenvironmental potential in Table 5.1 is more reliable as this potential is dependent upon natural conditions and therefore more predictable from geomorphology. However, it is important to note (as referred to in Chapter 5), that soil conditions can vary at a local scale, so that preservation conditions must be assessed at a site by site basis. It would be helpful if this column is updated to reflect this.

8.9 In summary, whilst the main text of the report offers a valuable baseline of geological and geomorphological history of West Sussex, Table 5.1 could easily be mis-interpreted. The report highlights the current paucity of geoarchaeological research in the area and provides examples of nationally and internationally significant archaeology discovered on Palaeolithic landscapes in southern England, known to also exist in the study area. This supports the indication that the area may have higher potential than initial analysis of the baseline data indicates and emphasises the need for further data to inform the baseline and responses to it.

9 Comments on Environmental Statement: Volume 4, Appendix 25.4 - Onshore Geophysical Survey Report - PINs Reference: APP-203

9.1 The report is a good initial evaluation to inform the need for further investigations in particular areas (by more geophysics or other evaluation techniques). However, we are concerned that the main ES chapter has taken results at face value without considering the caveats in the approach and the levels of confidence in the results. We highlight here, issues with confidence levels noted in the report:

- Page 5, Only “where ground conditions were suitable, and land access was possible”. This means that there could be a significant number of areas left without this level of baseline data, on which to base design and mitigation;

- A total of 23 of the survey areas contained either green waste or military artefacts possibly affecting magnetometer readings (obscuring signals from archaeological remains). This means baseline data in these areas could be affected, as could its subsequent interpretation;

- Page 35, Modern utilities and boundary fencing obscuring signals from archaeological remains; “it must be stressed that this is not a utility survey, and some utilities may not have been detected by the gradiometer survey, for example plastic pipes and small telecommunication cables”. This again means baseline data could be affected, as could its subsequent interpretation; and

- Pg.21, 3.1.5 in relation to Table 5.2 – “the effectiveness of the technique is lessened in areas with complex geology, particularly where igneous and metamorphic bedrock is present or thick layers of alluvium or till. All magnetic geophysical surveys must therefore take the effects of background geological and geomorphological conditions into account”. It is noted that the applicant describes that geology has been taken into account, but it’s unclear how potential effects have been considered in the detailed results. There seems to be no mention of hidden/missing signals due to deep alluvial sequences, waterlogged layers, etc.

9.2 We highlight here, issues with confidence levels NOT noted in the main report:

- Effects of weather prior to and during fieldwork – magnetometry doesn’t work very well in very wet and/or dry soil conditions;

- The depth of signals recorded by gradiometers can be quite short – this information is not available in the documentation provided by the applicant;

- The distance between measurements is not given. This will have affected the detail and precision of results; and

- The distance between traverses is not given. This will have affected spatial resolution.

9.3 This information should be integrated more explicitly into the interpretation of results, so that the baseline and responses to it are accurately assessed.

10 Comments on Environmental Statement: Doc Ref: 7.9 - Outline Onshore Written Scheme of Investigation - PINs Reference: APP-231

10.1 The outline onshore WSI is comprehensive and reassuring. It is detailed and comprehensive. The latter is confirmed in point 1.3.6:

- "The ACoW will ensure, on behalf of RED, that this Outline Onshore WSI (and subsequent SSWSIs) are implemented, will review any archaeological method statements, sampling/finds policies and reporting, and will lead consultation with Archaeological Curators, as advised by RED"

10.2 It is important that archaeological investigations can occur post-consent, as per point 1.2.5:

- "Detailed measures will be defined on the basis of evaluation survey information including any geophysical survey and evaluation trial trenching completed. Where required, for example where it has not been practicable to complete surveys in advance of the DCO Application, additional SSWSIs will be provided setting out proposals for evaluation survey. SSWSIs will also be produced for mitigation which may be required following completion of evaluation surveys. Development of appropriate mitigation strategies will be undertaken, as appropriate, with input from experienced specialists (e.g., geoarchaeologist and environmental archaeologist)."

10.3 All the suggested works are to be "proportionate and targeted" reflecting the significance of the archaeology. Whilst we agree with this approach, it all hinges on a fair and appropriate allocation of significance and sensitivity which the ES has failed to do, especially for remains from the Pleistocene and Early Holocene Epochs. The ES baseline assessment therefore needs updating to accurately demonstrate significance levels.

10.4 We welcome the addition of the site-wide, broad-scale Onshore Written Scheme of Investigation (WSI) and the acknowledgement that site-specific WSIs will be required. The surveys undertaken have provided useful information on the potential for archaeological remains along the route (though see separate comments on reports). However, the gathered information on known and potential archaeological remains has not been sufficiently used in designing mitigation strategies to avoid the loss of/harm to remains.

10.5 We realise that the geophysical survey is not yet complete (though the additional information submitted January 2024 has been helpful in adding to the baseline data), but we foresee that further evaluations, such as boreholes and trial-trenching, will be required in areas of archaeological sensitivity. We recommend closer collaboration with Local Authority Archaeologists to determine which sections require further evaluations.

10.6 We recommend the following amendments are made to the OOWSI to achieve more favourable outcomes for the historic environment:

- Section 1.3.8 - “with advice sought from Historic England (South West Regional Advisor and Science Advisor)”: It should be the South East Regional Advisor;

- Section 4.5.21 – add that geotechnical cores should be whole/intact for geoarchaeological investigations;

- Section 4.6.20 – change to: “50-100% depending on the site type and archaeological or historical period. Neolithic and Bronze Age sites often have a paucity of cultural remains; discreet features should be 100% sampled to maximise the potential for recovery”;

- Section 4.6.33 - add: “Samples from homogenous fills will be taken from different locations within a fill (scatter sample), in line with technical guidance including Historic England guidance (2011: Fig.5)”;

- Section 4.6.42 - add: “…(with the exception of organic remains and ceramics encrusted with organic residues)”; and

- Section 4.6.45, in reference to Scientific Dating: scientific dating should be a key consideration during the project design and not just during the post-excavation assessment, in line with Historic England Radiocarbon Dating guidelines (2022).

10.7 Although most of the investigative approaches described apply to sites of all archaeological periods, Palaeolithic and Mesolithic sites may also require specific approaches. It is therefore recommended that Curating the Palaeolithic and guidance on managing lithic scatters are also referenced.

10.8 We note that some of the CIfA Standards and Guidance have been updated and should be reflected in the reports.

10.9 Please note that not all references are up to date in the Sussex Archaeological Standards (2019); Historic England’s Science Advisor for the South East is Anne de Vareilles, on 07557 828187.

10.10 Annex E, point 1, please add: “The standards set out in Appendices 1, 2 and Annex A above will all be complied with, as a minimum.”

10.11 We also note the scale of this project requires the collection of a significant quantity and variety of historic environment and archaeological data in a wide range of formats including digital and physical artefact resource. We recommend it should be a requirement of the DCO, should it be granted, that a project plan be approved by the LPA for a secure project archive and outreach programme, which should then be implemented to the satisfaction of the relevant authorities.

11 Comments on Outline Marine Written Schemes of Investigation Date: August 2023; Revision A; Document Ref: 7.9 (Document Reference 6.3.14.2) PINs Reference: APP-235

11.1 Executive summary – document does not reference a protocol system for reporting discoveries of possible archaeological interest (as mentioned in paragraph 1.1.7). Section 1.2 (introduction) – it is important to see highlighted pre-construction activities comprising:

- survey and site investigations; and
- seabed preparation.

11.2 Paragraph 2.4.1 – reference should clearly be made to Historic England as a single entity to avoid any unnecessary confusion.

11.3 Section 3 (Proposed Development Details) – the possible development details quoted do not match the two development specifications set out in Chapter 4 (Proposed Development) or Chapter 16 (Table 16-15) which are up to 90 smaller WTG types or 65 larger WTG types. We make this point as it is not explicitly made clear if only the 90 smaller WTG design is being described as the "worst case" scenario (vis. ES Chapter 2, paragraph 4.1.7). We make this point in reference to the risk to either the known or presently unknown historic environment, as might be impacted (directly or indirectly) by installation craft and WTG foundations designs such as suction buckets, as these will have the most direct impact upon submerged archaeology.

11.4 Paragraph 3.1.4 – it is not clear why details are provided about the possible cable route landward of MLWS.

11.5 Section 5 (Summary of archaeology and cultural heritage baseline) – the detail provided here duplicates information effectively provided elsewhere in the ES (e.g. Table 5-1). The only WSI relevant information is that provided in sub-sections 5.5 (geophysical assessment) and 5.6 (sedimentary horizons).

11.6 Section 5.7 (Historic Seascape Characterisation) is to be removed as it is not relevant to the primary purpose of a WSI. It is the purpose of WSI to set out a clear methodological approach to how post-consent/pre-construction survey campaigns are designed, planned and delivered to incorporate archaeological objectives and thereby directly inform subsequent engineering design.

11.7 Section 5.8 (Research Frameworks) – the *North Sea Prehistory Research and Management Framework* is not included, which is also spatially relevant to the Eastern English Channel.

11.8 Section 5.9 (Relevant legal protection) – neglects to include the Merchant Shipping Act 1995 and the duty to report legally defined wreck material.

11.9 Section 6 (Embedded Enviro Measures) – Paragraph 6.1.3 states that the Outline Marine WSI was developed in consultation with the Regulator (MMO) and Archaeological Curators to form a framework that presents mitigation strategies. However, it is also apparent that detailed advice that we provided during pre-application (our letter dated 8th April 2022) on the (draft) outline WSI, such as removal of HSC content, has not been acted on.

11.10 Paragraph 6.1.5 – we must also draw your attention to the statement that "Any intrusive activities associated with pre-construction works will be planned to avoid any identified marine heritage receptors and AEZs as detailed in the embedded environmental measures (C-60…" However, a crucial factor is that while the conducting of "intrusive activities" should not impact known heritage assets, it must also be acknowledged that it is the purpose of the WSI to inform the planning of those "intrusive activities" to capture historic environment information through prior geophysical, geotechnical or visual inspection programmes vis. embedded mitigation measure C-59 (table 6-1).

11.11 Table 6-1 – measures to be employed during pre- and post-construction and decommissioning are mentioned, but not during construction despite being implied in Graphic 1, which suggests that further geophysical surveys may occur; it is essential, for effective use of an amended version of this WSI that it should adhere to the guidance already referenced in the text.

11.12 Section 6.2 (Embedded environmental measures for known wrecks and obstructions) – the text does not mention the application of 100m AEZ which must be explained, as they are included in Table 6-2. We add also that while an attempt has been made to determine "archaeological significance" using guideline published by DCMS in 2013, we consider a more effective strategy would have been to determine whether or not sites encountered could be identified as heritage assets (as described within EN-1, published November 2023, as defined in paragraph 5.9.3). The identification of a heritage asset marks the first stage in subsequent assessment by Historic England as to whether national importance is identifiable. This point is applicable to this project given the possibility of sites that could subsequently merit attention for designation within the English Inshore marine planning area.

11.13 Sections 6.3 (Embedded environmental measures for unlocated marine heritage receptors) and 6.4 (Embedded environmental measures for geophysical anomalies of archaeological potential) – the text here explains what each (embedded mitigation) measure is supposed to do without providing any information about the surveying methodology necessary to delivery that measure.

11.14 Paragraph 6.4.5 – the text states that "Further investigation of these sites will occur during future surveys works, where possible." This statement is unacceptable in reference to National Policy Statements EN-1 and EN-3 (published November 2023) and the attention directed at the historic environment.

11.15 Section 6.5 (Embedded environmental measures for deposits of geoarchaeological potential) – paragraphs 6.5.1 and 6.5.2 – whilst we agree with the principle of 6.5.2, we disagree that palaeo-landscapes are currently mapped and understood to a level which enable precise descriptions of impact. The Marine Archaeology Technical Report describes the main channels as no deeper than 25m, but the surface levels of palaeo-channels and the extent of channel sediments is not clearly understood. Impacts caused by pre- and post-construction, construction and decommissioning activities are not described.

11.16 Paragraph 6.5.4 – we note that this (draft) outline WSI "…outlines preliminary positions for archaeology specific cores…" it is inadequate that this WSI makes no attempt to describe appropriate geoarchaeological sampling strategies. In consideration that this document has failed to set out this basic information, it

becomes incumbent on any WSI subsequently produced (should consent be obtained), to correctly direct the detail to survey specific method statements for geotechnical and geoarchaeological campaigns. For example, what type of samples do the sample locations indicate on Fig.1-6? We add that, from the information provided, we expect identified areas with geoarchaeological potential to be extensively sampled and that approach described in detail.

11.17 Paragraph 6.7.8 – The following should have been added to the last sentence: "…as per embedded environmental measure C-57 and the PAD."

11.18 Section 6.8 (Further archaeological works) – the statement made in paragraph 6.8.2 is unachievable, as this purported Outline Marine WSI fails to include any survey methodological approaches, which should then be targeted and elaborated in a draft method statement subject to consultation with Historic England.

11.19 Paragraph 6.8.3 – states that "A pre-commencement survey Draft Marine WSI" is to follow, which does question the purpose of this document, other than to duplicate information provided elsewhere in the DCO application. Paragraph 6.8.4 appears to further confirm this matter as does Table 6-4.

11.20 Paragraph 6.8.7 – no further HSC assessments is necessary for any element of subsequent archaeological assessments, as might be conducted for this proposed development.

11.21 Section 7.2 (Retained Archaeologist/Archaeological contractors) – it is noticeable that the text repeatedly states an advisory role to RED. However, any such service should have the skills and competency to not just "advise", but to stipulate the precise requirements to delivery prescribed mitigation measures.

11.22 Section 7.3 (Archaeological curators) – in consideration of the attention given to subsequent WSIs to be produced (should this project progress), the curatorial body is also to be consulted on any such draft WSIs from which method statements should be produced. It is also apparent that some of the CIfA Standards and Guidance referenced should be updated to latest versions.

11.23 Paragraph 8.1 – the following should have been included *Curating the Palaeolithic* (published by Historic England, 2023). Furthermore, it is inadequate that no attention is given to either the type of geophysical survey platforms to be deployed post-consent to assist project delivery planning or geotechnical survey methodologies (e.g. borehole, vibrocore optimisation or even grab sampling in consideration of surface exposed peat).

11.24 Section 8.8 (Ordnance) – the statement made in paragraph 8.8.6 that if there is no UXO contractor on-board, that an archaeologist if present is to "…follow procedures set out in the Archaeological Watching Brief method statement" must be checked to ensure compliance with all prescribed procedures set by UK Health and Safety Executive.

11.25 Section 9 (Arrangements for review of the WSI) – this Outline Marine WSI has not presented any mitigation measures based on the archaeological assessments undertaken in preparation of the Rampion 2 ES. Furthermore, no methodological frameworks for the archaeological analysis and interpretation of survey data throughout the lifetime of the project have been set out in this WSI. We also do not agree with the approach set out in paragraph 9.1.4 regarding a preparation of a

subsequent “Draft Marine WSI” in consideration of the failure of this document to offer any methodological approach as explained herein.

11.26 Paragraph 9.1.5 we do not agree with this approach. It is our advice that the planning of pre-commencement surveys are to be informed by a Marine WSI approved by the MMO in consultation with Historic England, so that the surveys conducted are informed by archaeological objectives; this is the most efficient way to inform the planning of the distribution of turbines (including quantity and spacing), offshore substation locations, and offshore export cable routes. It is possible that new heritage assets will be discovered for which subsequent targeted archaeological investigation could be required to inform the placement of adequate AEZs. It is also possible that our understanding of sites or anomalies could change requiring an adaptive approach to mitigation design and delivery.

11.27 In summary, it is apparent that no geoarchaeological assessment has been conducted and the geophysical methodology is not sufficiently detailed. We still do not understand the landscape features in enough detail to know what the level of impact will be from this proposed development. Furthermore, none of the information submitted discuss potential impacts throughout the project and its defined stages. During pre-application and in response to the Preliminary Environmental Information Report, we have explained the importance of scale when analysing and interpreting places/landscapes as opposed to individual finds such as wrecks and aircrafts. It is therefore essential that a thorough and extensive geoarchaeological approach is set out in a WSI, as it is clear that the palaeo-landscape that is known to exist across the proposed development area, which potentially could be associated with some of the first hominin presence in the British Isles, is irreversibly and pervasively damaged.

11.28 It is apparent that we must, again, explain the importance of generating information that will enable dating of the deposits preserved within the palaeo-channels in order to determine their archaeological and palaeo-environmental potential and significance and test the geophysical results. In our advice in July 2022 to the Applicant, we stated that any preliminary geotechnical survey campaign undertaken to inform engineering questions should also be informed by geo-archaeological objectives to ensure maximum value was obtained from time and effort. We are not aware that any such coordination occurred. However, the principle is still applicable that to obtain geoarchaeological understanding, cores will be required in different locations (as alluded to in paragraph 6.5.3 and Figure 1-6) to those located for geotechnical engineering purposes. Therefore, not only do we need early engagement and liaison with the teams planning the geotechnical surveys, and access to the intact cores they recover, but we are likely to need additional cores, recovered specifically for geoarchaeological purposes. Furthermore, liaison between the offshore and onshore archaeological/geoarchaeological contractors should be coordinated to provide more robust results. It is also important that data from Rampion 1 and other relevant projects are integrated into the landscape study. The Applicant needs to acknowledge that additional fieldwork (i.e. further dedicated cores) in areas that will be impacted by foundations and seabed cable trenches could be required.

12 Development Consent Order, Date: August 2023; Revision A; Document Ref: 3.1, PINs Reference: APP-019

12.1 All advice is offered here without prejudice to any decision as might be made whether or not to grant consent for this proposed development.

12.2 Schedule 11 Deemed marine licence under the 2009 Act – Generation Assets
Part 1 (Licensed Marine activities) requires amendment:
1(4)(g) the address of Historic England is incorrect for this project and is to be amended to: Historic England, 4th Floor, Cannon Bridge House, 25 Dowgate Hill, London EC4R 2YA

12.3 Part 2 (Conditions): Pre-construction plans and documentation; It is essential that post-consent and pre-construction archaeological evaluation informs delivery plans to avoid in-situ archaeological sites, as could be revealed through assessments conducted and completed post-consent and pre-construction. We would therefore expect a condition to be applied to that effect on the DML.

12.4 Condition 11(2) to be revised to:
An archaeological written scheme of investigation in relation to the offshore Order limits seaward of MHWS, in accordance with an outline marine written scheme of investigation produced in consultation with the statutory historic body at least 12 weeks prior to the commencement of any survey work unless otherwise agreed by the MMO; to include—

(a) details of responsibilities of the undertaker, archaeological consultant and contractor;

(b) a methodology for further site investigation including any specifications for geophysical, geotechnical and diver or remotely operated vehicle investigations;

(c) archaeological analysis of high-resolution survey data, and timetable for reporting, which is to be submitted to the MMO within four months of any survey being completed;

(d) delivery of any mitigation including, where necessary, identification and modification of archaeological exclusion zones;

(e) monitoring of archaeological exclusion zones during and post construction;

(f) a requirement for the undertaker to ensure that a copy of any agreed archaeological report is deposited with the Archaeological Data Service, by submitting an OASIS (Online Access to the Index of archaeological investigations investigations) form with a digital copy of the report within six months of completion of construction of the authorised scheme, and to notify the MMO and Historic England that the OASIS form has been submitted to the Archaeological Data Service within two weeks of submission;

(g) a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised scheme; and

(h) a timetable for all further site investigations, which must allow sufficient opportunity to establish a full understanding of the historic environment within the

Order limits and the approval of any necessary mitigation required as a result of the further site investigations prior to commencement of licensed activities;

12.5 11(3) Pre-commencement surveys and archaeological investigations and pre-commencement material operations which involve intrusive seabed works must only take place in accordance with a specific outline written scheme of investigation (which must accord with the details set out in the outline marine written scheme of investigation) which has been submitted to and approved by the MMO.

12.6 Schedule 12 Deemed marine licence under the 2009 Act – Transmission Assets
Part 1 (Licensed Marine activities) requires amendment:
1(4)(h) the address of Historic England is incorrect for this project and is to be amended to: Historic England, 4th Floor, Cannon Bridge House, 25 Dowgate Hill, London EC4R 2YA

12.7 Part 2 (Conditions): Pre-construction plans and documentation;
It is essential that post-consent and pre-construction archaeological evaluation informs delivery plans to avoid in-situ archaeological sites, as could be revealed through assessments conducted and completed post-consent and pre-construction.

12.8 11(2) to be revised to:
an archaeological written scheme of investigation in relation to the offshore Order limits seaward of MHWS, in accordance with an outline marine written scheme of investigation produced in consultation with the statutory historic body at least 12 weeks prior to the commencement of any survey work unless otherwise agreed by the MMO; to include—

(a) details of responsibilities of the undertaker, archaeological consultant and contractor;

(b) a methodology for further site investigation including any specifications for geophysical, geotechnical and diver or remotely operated vehicle investigations;

(c) archaeological analysis of high-resolution survey data, and timetable for reporting, which is to be submitted to the MMO and any relevant local planning authority within four months of any survey being completed;

(d) delivery of any mitigation including, where necessary, identification and modification of archaeological exclusion zones;

(e) monitoring of archaeological exclusion zones during and post construction;

(f) a requirement for the undertaker to ensure that a copy of any agreed archaeological report is deposited with the Archaeological Data Service, by submitting an OASIS (Online Access to the Index of archaeological investigations investigations) form with a digital copy of the report within six months of completion of construction of the authorised scheme, and to notify the MMO and Historic England that the OASIS form has been submitted to the Archaeological Data Service within two weeks of submission;

(g) a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised scheme; and

(h) a timetable for all further site investigations, which must allow sufficient opportunity to establish a full understanding of the historic environment within the Order limits and the approval of any necessary mitigation required as a result of the further site investigations prior to commencement of licensed activities;

12.9 11(3) Pre-commencement surveys and archaeological investigations and pre-commencement material operations which involve intrusive seabed works must only take place in accordance with a specific outline written scheme of investigation (which must accord with the details set out in the outline marine written scheme of investigation) which has been submitted to and approved by the MMO and relevant local planning authority.

12.10 Schedule 16 Documents to be Certified: We do not agree with the inclusion of "Outline marine written scheme of investigation" which is incorrectly referenced as Doc Ref: 7.13 dated July 2023.

13 Commitments Register; Date: August 2023; Revision A; Doc Ref: 7.22 PINs Reference: APP-254

13.1 While we note that the Commitments Register highlights securing mechanism within the Development Consent Order it is apparent that the Commitments Register is not provided for within the DCO. We must therefore defer to the Examination Authority as to its inclusion as an enforceable requirement, should consent be obtained, or request the Commitments Register to be part of the requirements.

14 Policy of relevance to the proposals

14.1 The National Policy Statements are of relevance to the proposals: Overarching National Policy Statement for Energy (EN-1) (Department of Energy and Climate Change (DECC), 2011a, updated March 2023); National Policy Statement for Renewable Energy (EN-3) (DECC, 2011b); and National Policy Statement for Electricity Networks (EN-5) (DECC, 2011c).

14.2 Each of these statements includes policies specifically related to the avoidance of harm to heritage assets and guidance for the Examining Authority on determining applications which would cause harm to the significance of heritage assets.

14.3 We advise that the application in its current form does not meet the requirement of these policy documents in relation to heritage, and we refer here in particular to EN-1 (published November 2023) and the following paragraphs:

- 5.9.6 Non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to Scheduled Monuments should be considered subject to the policies for designated heritage assets. The absence of designation for such heritage assets does not indicate lower significance.

- 5.9.11 Where a site on which development is proposed includes, or the available evidence suggests it has the potential to include, heritage assets with an archaeological interest, the applicant should carry out appropriate desk-based assessment and, where such desk-based research is insufficient to properly assess the interest, a field evaluation.

- 5.9.14 Careful consideration in preparing the scheme will be required on whether the impacts on the historic environment will be direct or indirect, temporary, or permanent.

- 5.9.15 Applicants should look for opportunities for new development within Conservation Areas and World Heritage Sites, and within the setting of heritage assets, to enhance or better reveal their significance. Proposals that preserve those elements of the setting that make a positive contribution to the asset (or which better reveal its significance) should be treated favourably.

- 5.9.16 A documentary record of our past is not as valuable as retaining the heritage asset, and therefore the ability to record evidence of the asset should not be a factor in deciding whether such loss should be permitted, and whether or not consent should be given.

- 5.9.22 In considering the impact of a proposed development on any heritage assets, the Secretary of State should consider the particular nature of the significance of the heritage assets and the value that they hold for this and future generations. This understanding should be used to avoid or minimise conflict between their conservation and any aspect of the proposal.

- 5.9.25 When considering the impact of a proposed development on the significance of a designated heritage asset, the Secretary of State should give great weight to the asset's conservation. 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.

- 5.9.26 The Secretary of State should give considerable importance and weight to the desirability of preserving all heritage assets. Any harm or loss of significance of a designated heritage asset (from its alteration or destruction, or from development within its setting) should require clear and convincing justification.

15 Historic England Written Representation: Conclusions

15.1 Historic England do not object in principle to the Proposed Development.

15.2 We consider, however, that there is the potential for a high level of harm to non-designated archaeological heritage assets, some of which may be of national significance. This pertains to both the onshore and marine receptors, but particularly concerns the area within Zone 2: South Downs, which has a concentration of nationally important heritage assets and high archaeological potential.

15.2 Our concerns and requirements can be summarised as follows:

i) Insufficient evaluation has been done in advance of the application for onshore, intertidal and offshore areas. It would therefore be important to secure these works post-consent, but pre-construction should consent be granted;

ii) The onshore route selection process was determined without due regard to the potential significant effects on heritage; in the case of chosen route LACR01d, this has a greater impact on Archaeological Notification Areas than the original PEIR and SIR routes. The applicant should therefore demonstrate how they can practicably avoid harm to the historic environment, and clearly and convincingly demonstrate provision for retention of significant archaeological remains in situ where possible;

iii) There is inaccurate assessment of magnitude of impact and significance of effect. We expect the ES to demonstrate an accurate assessment of magnitude, effects, and levels of harm;

iv) The embedded environmental measures do not include convincing and practicable provision to avoid the risk of harm to potentially nationally important archaeological remains. Avoiding harm to nationally important heritage assets should be a primary objective;

v) No marine geotechnical data was acquired to inform production of the Environmental Statement and therefore corroboration is not possible with geophysical data for this area known to be of prehistoric archaeological interest. We also do not agree with the assessment provided regarding the historic character of the proposed marine development area;

vi) The application includes an Outline Marine Written Scheme of Investigation (WSI) as a mitigation action which should inform archaeological assessment of further survey data to be acquired (should consent be obtained) post-consent. However, we are not satisfied by the standard of the Outline Marine WSI presented and it is our advice that it should not be accepted as a certified document;

vii) The draft DCO includes two (draft) Deemed Marine Licences which include conditions for WSIs. However, the wording requires amendment to ensure implementation in the crucial post-consent and pre-construction phase to adequately inform the planning and engineering design, and delivery of the proposed project.

viii) The Development Consent Order should contain requirements to ensure that appropriate safeguards are in place regarding the historic environment.

15.3 The Outline WSI's for onshore and offshore will be key documents to ensure adequate provision for historic environment protection, mitigation and enhancement post DCO, should consent be forthcoming.

15.4 We are not satisfied by the standard of the Outline Marine WSI presented and it is our advice that it should not be accepted as a certified document.

15.5 The Outline Onshore WSI is detailed and comprehensive, and we welcome the acknowledgement that site-specific WSIs will also be required. However, the baseline information regarding archaeological remains has not been sufficiently used in designing mitigation strategies to avoid the loss of/harm to remains (see points iii and iv above).

15.6 The results of archaeological work undertaken in accordance with the onshore and marine WSIs should inform amendments to the design to avoid or mitigate harm to heritage assets. Harm to nationally important heritage assets should be avoided, if possible.

15.7 In relation to the Historic Environment matters, and in coming to a decision on the application, the ExA should require the applicant to address how they would avoid harm to the historic environment, and clearly and convincingly demonstrate practical provision for retention of archaeological remains in situ. Only then would the ExA be able to weigh any residual harm to the historic environment against the benefits of the proposals, as set out in policy.

15.8 The ExA should also require the applicant to seek to enhance or better reveal the significance of identified heritage assets. Provision of an appropriately accessible archive may form part of this commitment.

15.9 If consent is granted, provision should be made in the Schedule of Requirements to secure avoidance and/or mitigation of harm by requiring the approval of Relevant Authorities.