East Anglia
Offshore Wind

VATTENFALL

SCOTTISHPOWER
RENEWABLES

East Anglia THREE

Appendix 21.1

East Anglia ONE Water Resources and Flood Risk Consultation

Environmental Statement
Volume 3
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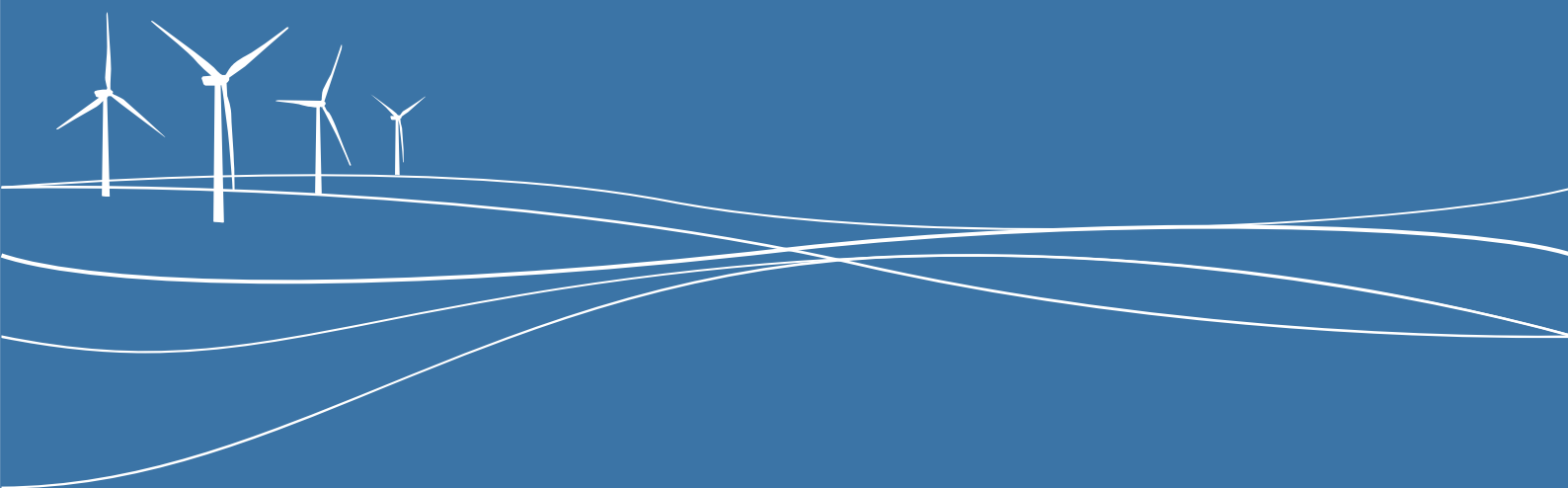

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21.1 Historic Water Resources and Flood Risk Consultation Undertaken During Development of the East Anglia ONE Project

Table 21.1.1 East Anglia ONE Water Resource and Flood Risk consultation (reproduced verbatim from the East Anglia ONE Environmental Statement)

Consultee	Date /Document	Comment	Response / where addressed in the East Anglia ONE ES
Babergh District Council (BDC)	East Anglia ONE Scoping	Impacts on ground conditions to be considered.	Impacts on ground conditions have been considered in Section 20.6
Planning Inspectorate (formerly Infrastructure Planning Commission) (PI)	East Anglia ONE Scoping	Construction impacts of laydown areas and access tracks should be considered. Cross-reference to potential impacts on agriculture and soils in relation to any potential contaminated land and run-off should be made.	Construction impacts of laydown areas and access tracks have been considered in Section 20.6 and also *Volume 3. Chapter 23: Land Use*
Environment Agency (EA)	East Anglia ONE Scoping	Questioned whether the underground cables will be oil filled. If so, the EIA needs to assess pollution impacts should they break or leak. If the cables are oil cooled there should be a monitoring system to detect leaks.	It is confirmed that the cable would not be oil filled.
Landowner I,	PEIR comments	Concern regarding damage to historic Bawdsey Cliffs, including potential impact to some properties.	Horizontal Direction Drilling (HDD) technique would avoid damage to cliffs and properties. Access route to beach would be outside Site of Special Scientific Interest (SSSI) area. (See also *Volume 3, Chapter 23: Land Use* and *Chapter 25: Archaeology and Cultural Heritage*)
Landowner II	PEIR comments	Concern about potential impact on coastal erosion at Bawdsey Cliffs and the mouth of the River Deben.	A coastal assessment of the landfall site has been carried out by ABPMer Ltd (reference 1874, dated October 2011), to assess the potential for coastal

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			erosion within the cable landfall area and to the north as far as East Lane and south as far as Felixstowe. This issue is considered within the ES in (Volume 2) Chapter 6. This assesses potential disruption to coastal morphology at the offshore cable landfall and Deben Estuary crossing as a result of installation activities as well as the presence of the cable and considers impacts to be not significant.
EA	PEIR comments	Beach height variability will need to be incorporated into design at landfall, due to annual beach variability and coastal change. As the beach has an erosion trend, decommissioning may be required in future if the cable is exposed.	A coastal assessment of the landfall site has been carried out by ABPMer Ltd (reference 1874, dated October 2011), to assess the potential for coastal erosion within the cable landfall area and to the north as far as East Lane and south as far as Felixstowe. This issue is considered within the ES in *Volume 2, Chapter 6*. Detailed design of the HDD technique to be used at the landfall would take into account detail of the erosion trends. Direct impacts to the SSSI are proposed to be mitigated through the Use of HDD for installation of ducts, and the construction of temporary access to the beach

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			outwards from the cliff.
EA	PEIR comments	Noted that a PRA was to be undertaken for contaminated land purposes, including assessment of aerial photography and a site walkover of potentially affected areas.	This work has been completed and results are incorporated in this Chapter and in *Volume 5, Appendix 20.1*
EA	PEIR comments	Noted that the PRA must conform to a specific framework (NPPF, CLR11) and be in line with EA Guiding Principles for Land Contamination.	These comments have been noted in compiling the PRA (*Volume 5, Appendix 20.1*) and this Chapter.
EA	PEIR comments	The Environmental Statement should include a desk study, conceptual model and initial risk assessment and provide assurance risks to controlled waters are understood and addressed.	This issue is focused on in the PRA (*Volume 5, Appendix 20.*1)
EA	Phase 2 Consultation comments	Suggested monitoring scheme for coastal erosion which would differentiate between the natural erosion rates and the increase in erosion (extent or rate) as a result of the Development Consideration needed of the potential impacts on cliff stability due to vehicular access. Monitoring may be required, with any detrimental impact on coastal process requiring mitigation.	HDD techniques are proposed as the method by which cables and ducts would be brought ashore at the landfall. Detailed design of the HDD technique to be used at the landfall would take into account detail of the existing erosion trends. A coastal assessment of the landfall site has been carried out by ABPMer Ltd (reference 1874, dated October 2011), to assess the potential for coastal erosion within the cable landfall area and to the north as far as East Lane and south as far as Felixstowe. This issue is considered within the ES in *Volume 2, Chapter 6*.

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EA	Phase 2 Consultation comments		This Chapter assesses potential disruption to coastal morphology at the offshore cable landfall and Deben Estuary crossing as a result of installation activities as well as the presence of the cable, and concludes impacts to be not significant. As such, monitoring is deemed unnecessary. Cliff stability is considered within Section 20.6. The cliff profile would be surveyed prior to construction of the temporary access ramp to ensure the profile is maintained once construction is complete.
EA	Phase 2 Consultation comments	Deben Estuary Partnership enquired whether arisings from the Deben Estuary directional drilling can be directed towards saltmarsh regeneration projects. Such recycling would be viewed positively, subject to relevant standards being met. In determining feasibility, testing of the arisings would be required to ensure they meet required standards, along with demonstration that the material was of a suitable composition and that contaminant levels were acceptable. Re-using soils at exempt sites or using the Claire Protocol should be considered in preference to disposal.	Cliff stability is considered within Section 20.6. The cliff profile would be surveyed prior to construction of the temporary access ramp to ensure the profile is maintained once construction is complete Detailed method statements for HDD operations would be finalised prior to construction. These, and the Code of Construction Practice, would consider disposal of arisings. For the purposes of the ES, as a worst case, it has been assumed that arisings from HDD operations would be disposed of in a licensed landfill.

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		Landfill disposal should only be used where no other suitable option exists.	
Suffolk Preservation Society (SPS)	Phase 2 Consultation comments	Society has concerns that the Bawdsey Manor historic assemblage and SSSI (Geological) could be affected should HDD prove ineffective.	EAOW propose the use of HDD techniques only at the landfall. Open cut techniques are not proposed.
East Suffolk Internal Drainage Board (ESIDB)	Phase 2 Consultation comments	Local soils are known to be quite unstable; therefore significant works may be required for several years following cable installation to ensure watercourse bank stability. Highlighted the frequency of marsh flooding and how marshes have shrunk over the years, including leaving one or two bridges 'high and dry'. Suggested consideration of the possible need to relay cables in the future to address land shrinkage problems that may arise.	Detailed crossing methodologies would be prepared prior to construction and would take account of works necessary to ensure bank stability. Detailed project design including cable burial depths and routing of trenches within the working width would take account of land shrinkage risks. Storage and handling of soils during construction, and reinstatement following construction will be completed following strict guidelines to protect soil qualities.
Bawdsey Parish Council (BPC)	Phase 2 Consultation comments	Details regarding cable landfall route and potential impacts on erosion due to landfall required.	Details on cable landfall route are provided *within Volume 1, Chapters 3 and 4.* Potential disruption to coastal morphology at the cable landfall is considered within the ES in *Volume 2, Chapter 6.*
Natural England (NE)	Phase 2 Consultation comments	Potential for pollution/contamination of the SSSI/SPA as a result of compound operations should be considered.	These issues all fall within the scope of industry best practice, which is detailed in the embedded mitigation section of this chapter.

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		Potential for contaminant leakage and management of drilling fluid should be considered. Noted commitments made to carry out all operations responsibly and the inclusion of a Pollution Prevention Plan.	
NE	Phase 2 Consultation comments	Cable landfall ideally needs to be outside the SSSI to avoid impacts, as per the National Planning Policy Framework regarding 1) preventing harm to geological conservation interests; and 2) development on SSSIs likely to have an adverse effect should not normally be permitted.	HDD is proposed at the landfall site to avoid any direct impacts to the SSSI. Impacts are assessed in Section 20.6. Meetings have been held with NE to agree HDD.
NE	Phase 2 Consultation comments	Should the cable landfall be within the SSSI, then HDD is preferable to open cut trench techniques as this will limit impacts on the SSSI, although would require further detail of potential impacts in order to determine mitigation.	HDD is proposed at the landfall site. Impacts are assessed in Section 20.6.
NE	Phase 2 Consultation comments	Open cut trench for the cable landfall could have a potentially significant impact on the SSSI, resulting in the loss of material.	HDD techniques only are proposed to be used at the landfall site.
NE	Phase 2 Consultation comments	Open cut trench needs to be located in the least sensitive part of the SSSI. Require a geological survey to be undertaken to identify this, and seeking to agree survey requirements in advance. Post determination of the location, the area affected will	The use of HDD would preclude the excavation of any trenches within the SSSI.

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		need to be exposed and recorded before work starts. Watching brief required during construction to record temporary sections and fossils encountered.	
NE	Phase 2 Consultation comments	Unclear what the precise impact of the temporary works and access road would be; therefore further information required. Ideally these should also be situated outside the SSSI beyond the northern boundary, as per above comments.	There are no anticipated direct impacts on the SSSI, as the temporary access route are proposed to be constructed outwards from the cliff face, not excavated into it. The temporary access route would be removed after construction. Given the proposed location of the temporary works at the landfall being on the beach and above the cliffs, these would not directly affect the SSSI.
NE	Phase 2 Consultation comments	If works proceed and impact directly on the SSSI, opportunities for geological enhancement via limited site clearance are recognised.	Direct impacts to the SSSI are proposed to be mitigated through the use of HDD for installation of ducts, and the construction of temporary access to the beach outwards from the cliff.

Appendix 21.1 Ends Here