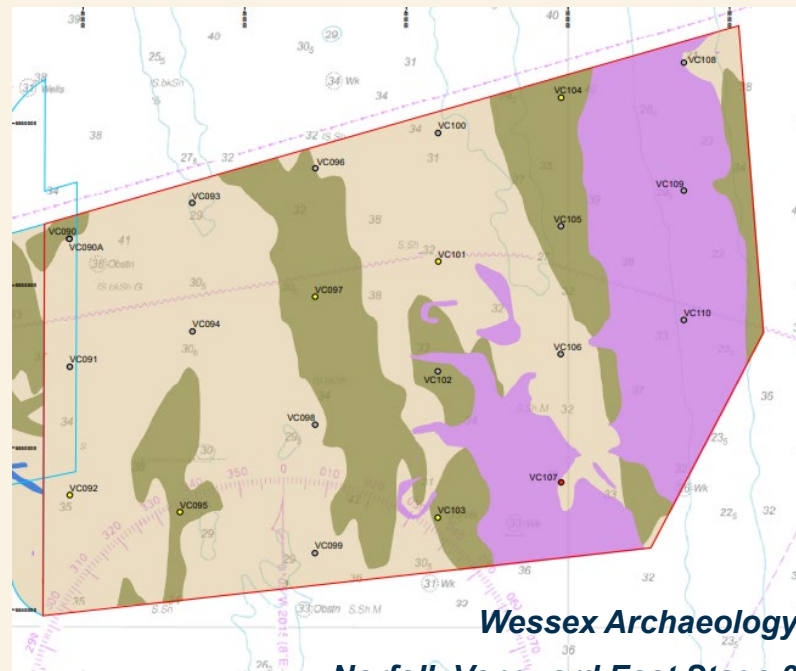


The Role of Marine Geoarchaeology in Environmental Impact Assessment

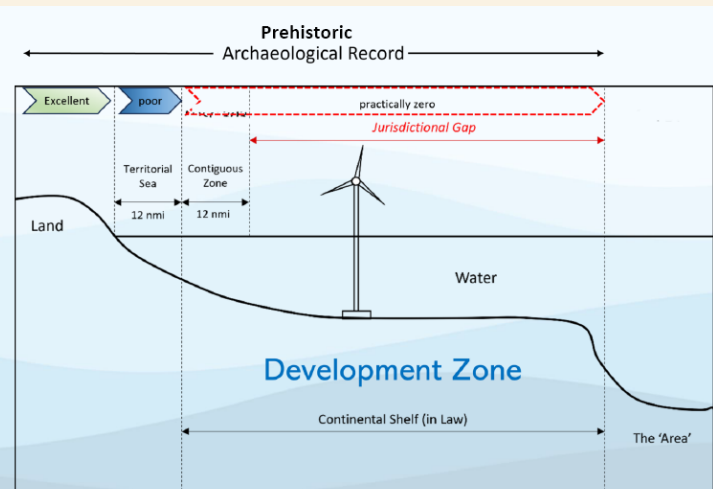
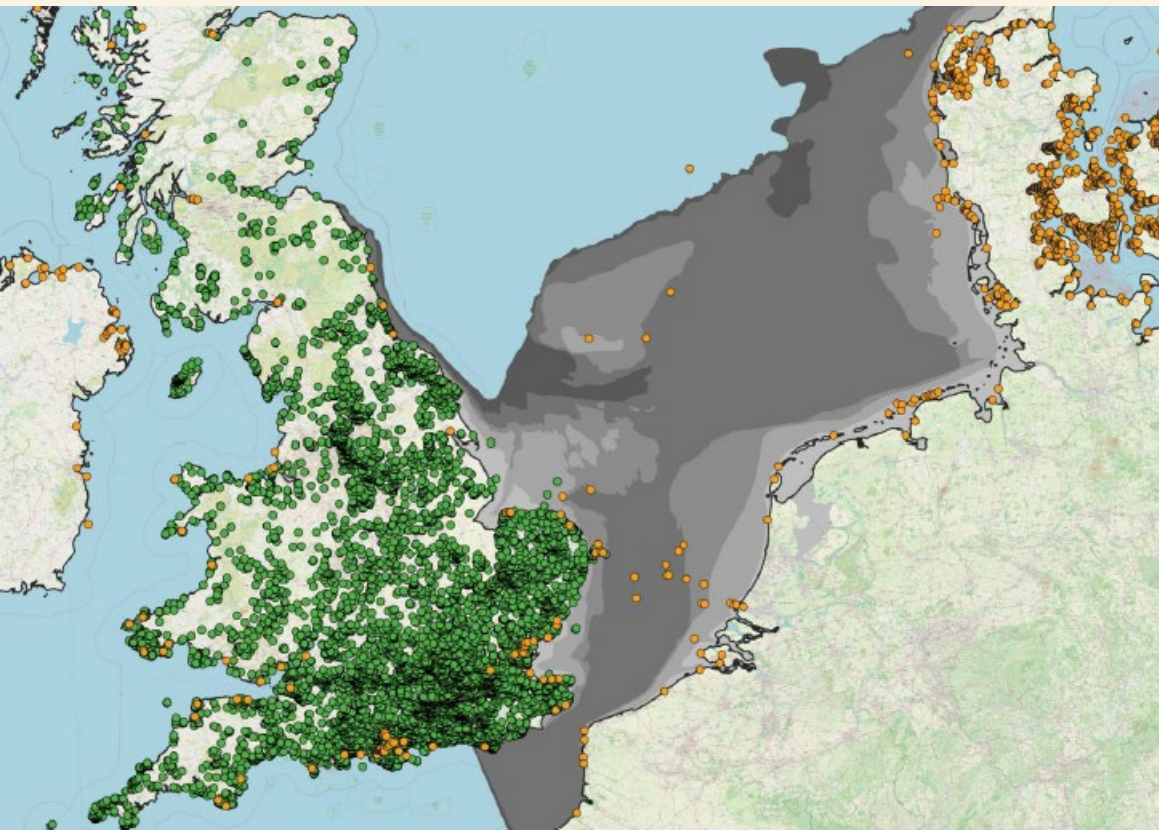
Victoria Boothby
27 May 2026

CIfA Geoarchaeology and Palaeoenvironment Network



Wessex Archaeology
Norfolk Vanguard East Stage 3

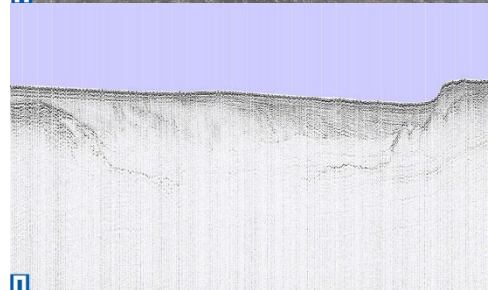
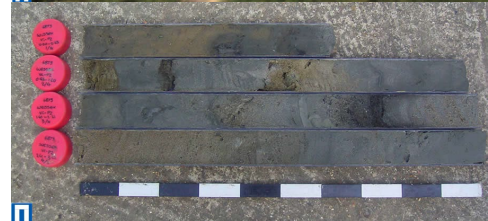
Palaeolithic and Mesolithic sites and findspots



*Taken at the Flood
Industry Partner Booklet*

Wessex Archaeology Seabed Prehistory Project

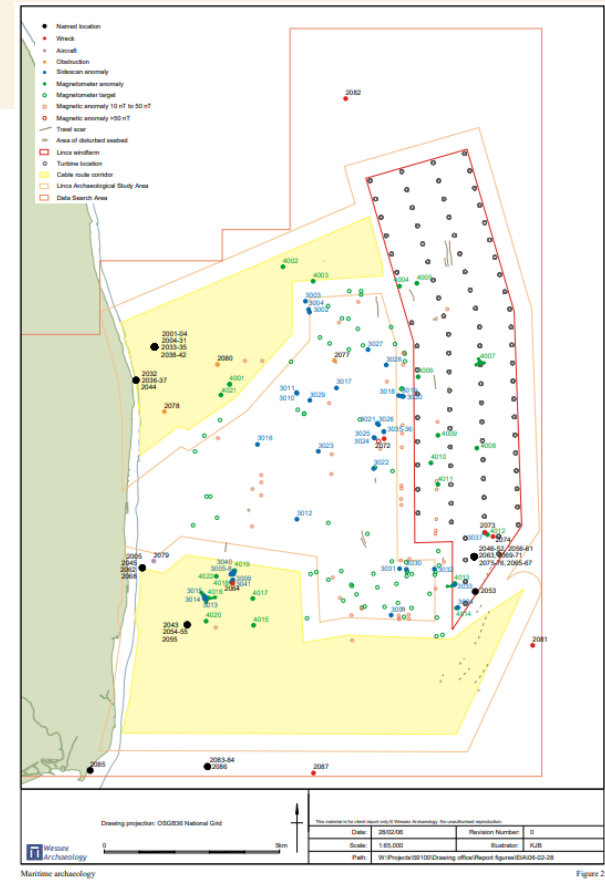
- Aggregate Levy Sustainability Fund - 2003 to 2007
 - Geophysical survey
 - Vibrocore survey and geoarchaeological assessment
 - Grab samples (some success?)
-
- Key outcomes:
 - Archaeological resource exists within submerged palaeolandscapes
 - Prehistoric landscapes can be reconstructed with high confidence
 - Existing EIA data collection was inadequate for archaeology
-
- Key recommendation - multi-disciplinary approach combining:
 - Targeted geophysical survey and interpretation
 - Directed coring strategies
 - Geoarchaeological logging and palaeoenvironmental analysis
 - Digital terrain and palaeolandscape modelling



www.wessexarch.co.uk/our-work/seabed-prehistory

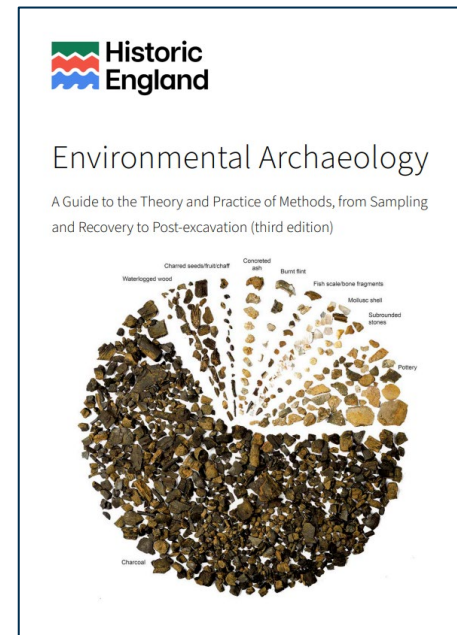
EIA for Offshore Wind Farms

- 2006 Lincs Offshore Wind Farm Archaeological Assessment (Wessex Archaeology) 52 pages – 8km off the Lincolnshire Coast (PPG16!)
- Geophysical data (paper rolls!), no geotechnical
- Six pages on Seabed Prehistory ☺
 - Existing records and documentary evidence for:
 - Glaciation and Sea Level Change
 - Topography and Climate
 - Known and Potential Terrestrial Archaeology



Policy, Legislation and Guidance

Category	Key Policy / Legislation	Relevance to Heritage
EIA & assessment	EIA Regulations (Marine Works) 2007	Require assessment of impacts on marine cultural heritage as part of Environmental Impact Assessment
Primary legislation	Marine and Coastal Access Act 2009	Establishes marine planning system and licensing; includes protection of the marine historic environment
UK-wide policy	UK Marine Policy Statement (2011)	High-level policy guiding marine plans; recognises heritage as a material consideration in decision-making
Marine plans	Regional Marine Plans (e.g. East, South, Scotland's National Marine Plan, Welsh National Marine Plan)	Provide spatial policies; include specific policies for conserving heritage assets and seascapes
Policy guidance	COWRIE / Historic England / HES / Cadw guidance	Provides best practice for assessing and managing impacts on marine historic environment

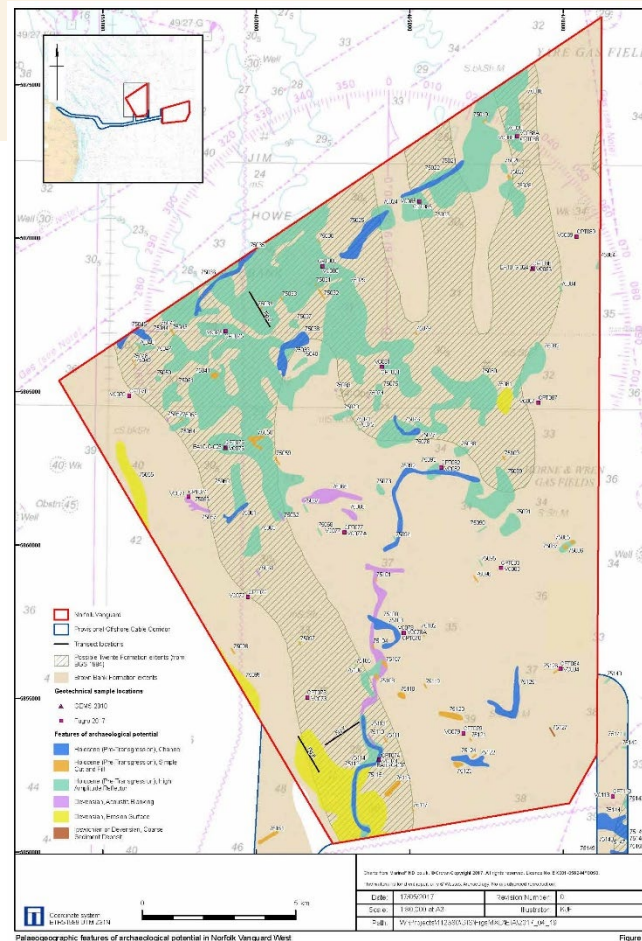


Case Study 7

The Norfolk Projects: embedding environmental archaeology in submerged landscape assessments for offshore wind farms

EIA for Offshore Wind Farms

- 2017 Norfolk Vanguard Offshore Wind Farm Marine Archaeological Technical Report (Wessex Archaeology) 416 pages – two areas 89km and 45km off the Norfolk Coast
- Geophysical data (palaeolandscape assessment)
- Geotechnical data - 65 geotechnical sampling locations
- 15 pages on Seabed Prehistory plus four appendices on stages 1-4 geoarchaeological assessment
-all just to support EIA (and it hasn't stopped there!)



Where are the people?

- Can you have an impact on a geological formation or a palaeolandscape feature?
- Would it matter if you did (why would this be a significant effect)?
- Are features/deposits and ecofacts 'EIA' receptors in the same way sites/artefacts are?
- Are these 'heritage assets'?
- Is marine geoarchaeology just one of a suite of tools for trying to find 'the people'?
- If its mitigation, what are we mitigating?



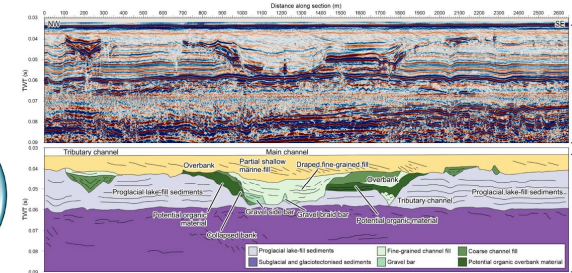
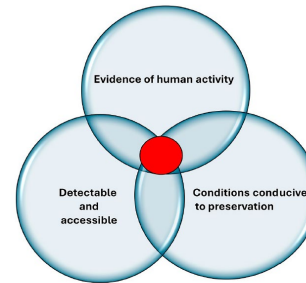
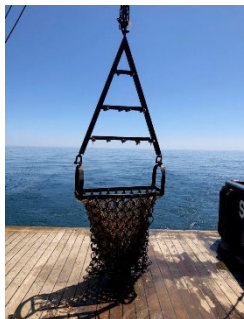
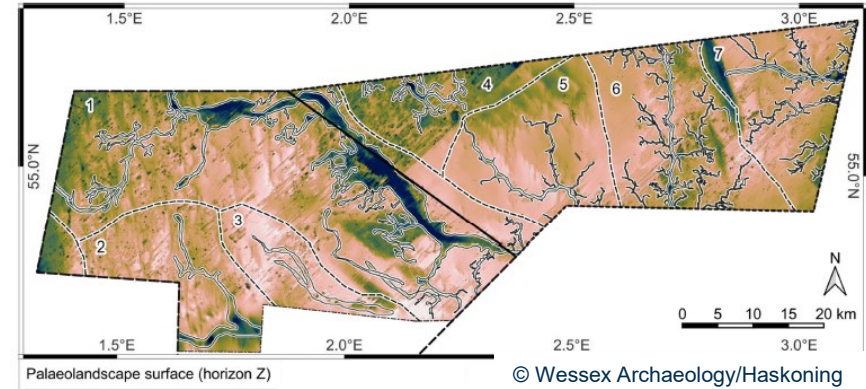
Investigation and Mitigation?

Will these locations and samples be any use in helping us find where the archaeology is?	Planning	Will these locations and samples be enough for us to understand the impact we need to mitigate?
Where are the deposits which could help us find archaeology?	Stage 1	Marine equivalent of trial trenching (evaluation)
Will the deposits help us to find archaeology?	Stage 2	Are the deposits suitable for providing mitigation?
Will the paleoenvironmental remains tell us anything about where people were living?	Stage 3	Extent of mitigation – what is the expected contribution to knowledge and understanding
What environments and physical landscapes were people living in?	Stage 4	Mitigation - contribution to knowledge and understanding
Peer reviewed results	Stage 5	Mitigation – realised through publication

What comes next?

EIA for Offshore Wind Farms

- 2026 - Where do we go from here?
- Zone wide palaeolandscape studies
 - Vanguard East and West and Boreas (RWE)
 - Dogger Bank A, B, C (and D) and Sofia (SSE/Equinor and RWE)
- Predictive modelling and sampling
 - *Taken at the Flood*
 - *ALSF Seabed Prehistory*



Any questions?

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[linkedin.com/company/haskoning](https://www.linkedin.com/company/haskoning)