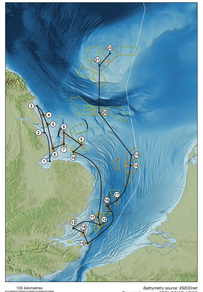
British Geological Survey

Chronostratigraphy from offshore wind farm sites, southern North Sea, UK sector

Version 1, 2026

Location map
1:4 million scale



100 kilometres

Bathymetry source: EMODnet
Topography source: ESRI, GSAR, USGS

UK Offshore Wind Farm sites and landfill assessments

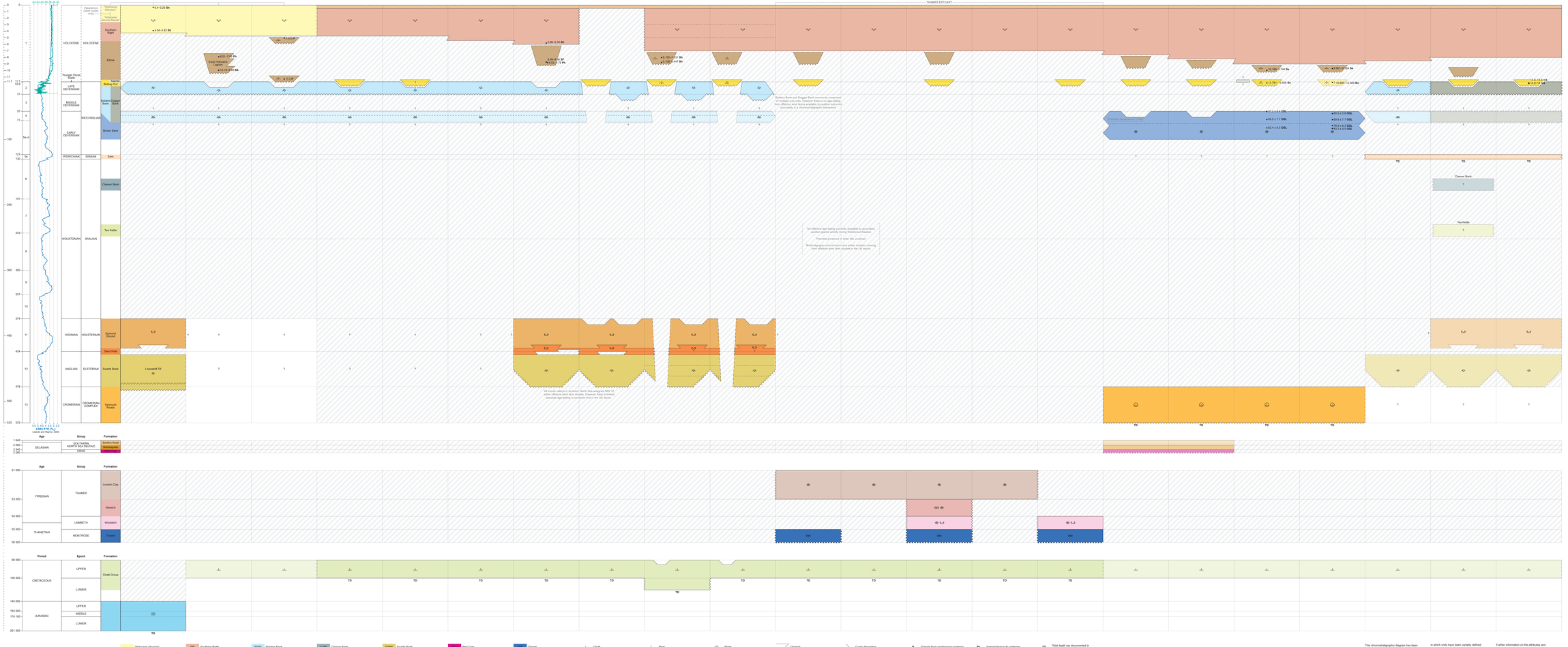
UK Offshore Wind leases (Crown Estate)

1. Race Bank Nearshore Cable Route
2. Hornsea Nearshore Cable Route (Horseshoe Point)
3. Withow Gap, Skipsea Cable Route (Dogger Bank South Offshore Wind Farm)
4. Westermost Rough Offshore Wind Farm
5. Humber Gateway Offshore Wind Farm
6. Lincolnshire Offshore Wind Farm
7. Race Bank Offshore Wind Farm
8. Triton Knoll Offshore Wind Farm
9. Dudgeon Offshore Wind Farm
10. Sheringham Shoal Offshore Wind Farm
11. Greater Gabbard Offshore Wind Farm
12. Galloper Offshore Wind Farm
13. Gunfleet Sands Offshore Wind Farm
14. London Array Offshore Wind Farm
15. Thanet Offshore Wind Farm
16. East Anglia Two Offshore Wind Farm
17. East Anglia One Offshore Wind Farm
18. Norfolk Vanguard
19. Norfolk Boreas
20. Hornsea
21. Dogger Bank A
22. Sofia

Overview map
1:20 million scale

1000 kilometres

Coastline source: ESRI



Data: N. Dove, D. Lee, J. Finlayson, A. Stewart, W. and MacDonald, C. 2026. 3D geological model of the southern North Sea (UK): an updated assessment using data from offshore wind farms. British Geological Survey Open Report, OR/26/00005. 46pp.

NORA: https://nora.nerc.ac.uk/id/eprint/541371

"Holocene Alluvium"
"Holocene Alluvial Sands"
Mobile sand layer
Unconformity

SBI Southern Bight
ELBW Elbow
TN Tweetle
BOCT Bottney Cut
BBNK Bolders Bank
DBNK Dogger Bank
BNB Brown Bank
EE Eem
CLBK Cleaver Bank
TKN Tea Kettle
EG Egmond Ground
SHLE Sand Hole
SWBK Swarte Bank
YM Yarmouth Roads
SK Smith's Knoll
WK Westkapelle
RCR Red Crag
LC London Clay
HWH Harwich
WL Woolwich
TH Thanet
CK Chalk Group
Jurassic

Chalk
Clayskit
Diamict
Glauconitic silty sand
Peat
Sand (unconsolidated)
Sand
Sandskit
Shale
Till

Channel
Transgressive boundary
Erosive boundary
Non-erosive boundary
Cyclic deposition
Lateral change
Sub-unit boundary (schematic)
Uncertain boundary

P Sample from peat/organic material
Sh Sample from shell
SF Sample from stem fragment
Ph Sample from phragmites australis (reef)
Bs Sample from bulk sediment
Bu Sample from bud scale
Se Sample from seed
TD Total depth (as documented in cited farm site investigation)
OSL Optical Stimulated Luminescence
? Tentative/uncertain date result

This chronostratigraphic diagram has been prepared in accordance with the stratigraphic framework for offshore wind farms in the southern North Sea (SNS) sites in the UK sector of the southern North Sea (SNS). Stratigraphic units are defined and named in the SNS based primarily drawn from a Quaternary stratigraphic framework progressively developed by the BGS (e.g. Cameron et al., 1992; Stoker et al., 2011), in which units have been variably defined according to seismic lithological, and chronostratigraphic properties, depending on data availability and distinguishing unit characteristics. Findings and interpretations from the SNS sites have been further informed by key research findings, as well as stratigraphic observations and frameworks from neighbouring territorial waters (e.g. Netherlands).

Further information on the attributes and limitations of the offshore stratigraphy is provided within the accompanying report.

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