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The Quaternary Geology of the North Sea

The case for a MIS 16 Glaciation in Britain and the North Sea region - evidence, significance, complications, and potential resolution

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The issue of a MIS 16 glaciation in Britain and the adjacent area of the North Sea basin has received much attention in recent years. It is important because it would be concerned with the first extensive glaciation of lowland Britain and has immense significance for early human occupation of the British Isles.

It has been proposed that a glaciation moved south from eastern Scotland to reach northern East Anglia prior to the Anglian glacial stage, and this has been called the Happisburgh Glaciation. The attribution to MIS 16 is based on correlation of the glacial deposits with terrace aggradations of the Bytham River, the presence of temperate climate palaeosol features between the till attributed to this event and an overlying till attributed to the Anglian (MIS 12) Stage, and the presence of marine deposits, associated with a high sea-level event between the two sets of glacial deposits. This model is supported by evidence for glaciation over Britain and the North Sea region from Core MD01-2448 in the Bay of Biscay, based on sediment accumulation rates.

However, recent detailed work on sediment sequences within north Norfolk using biostratigraphy and AAR determinations has come to the conclusion that the deposits attributed to the Happisburgh Glaciation are of MIS 12 age, and an MIS 16 age is untenable.

The explanation for this conundrum is far from clear. This presentation seeks to investigate this issue and will present all the views. We wish to set-out the evidence in order to engage more fully with the community and attempt to resolve the issue together, by either inspired insight or by the proposition of new research directions.