# The Brown Bank (Southern North Sea): a geo-archaeological investigation

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The Brown Bank is a stable sand ridge nearly 30 km in length, located in the central part of the North Sea. At its base, water depths reach c. 30 m below sea level, with the maximum top of the bank sited 16 m below sea level. Seeing that relative sea level was significantly lower in the past (up to 100 m after the Last Glacial Maximum, this area would have been a dry land surface which subsequently became inundated during the rapid Early Holocene sea-level rise, sometime between 10 and 8 ka BP. Proof of this once dry land is evidenced by faunal and archaeological artefact recoveries, including Late Pleistocene fossil remains from land mammals including woolly mammoths, reindeer and bison, as well as (sometimes decorated) Mesolithic tools and human remains. These finds are mostly trawled-up by fishermen in the vicinity of the Brown Bank and, as such, their stratigraphic origin is mostly unknown.

This project aims to detect, image and map the submerged landscape now mostly buried beneath a cover of sands. In particular, it targets the Holocene inundation surface, which is most likely linked to the archaeological finds. Through mapping of such surface(s), we intend to find the maximum extent of the submerged landscape as well as to identify areas which may form the source deposit of the archaeological material. Some ground-truthing has been performed (vibro-cores) which are being investigated for palaeo-environmental purposes. These data will aid the reconstruction of the landscape and environments in which Mesolithic people lived and travelled. Moreover, it will allow us to better determine the timing of the inundation of the land surface, adding to our understanding of relative sea-level rise in the North Sea.

This poster presents some geophysical, acoustic and core data that were acquired as part of surveys conducted in 2018 and 2019, and which will act as the base for the planning of two more surveys lined up for 2021.

Keywords: Archaeology; Palaeo-landscape; North Sea; Brown Bank; Sea-level rise; Holocene; Geophysics