



A dynamic retreat model for the North Sea Lobe of the British and Irish Ice sheet from the Vale of Pickering, UK

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During the Last Glaciation, a large proglacial lake occupied the Vale of Pickering in North Yorkshire, UK. The lake was bounded to the east by ice in the North Sea and to the west by ice in the Vale of York. Until recently, the duration, extent and evolution of Glacial Lake Pickering in response to changes in ice sheet dynamics was uncertain (e.g. Livingstone et al 2012). New research using glacial geomorphological mapping from high-resolution LiDAR and NextMap data combined with luminescence dating has shown that ice may have extended into the Vale of Pickering much earlier and in several advance/retreat stages, leaving a series of subtle moraines. This is also supported through several stages of lake development, reflected in historical and recently recovered boreholes. These results indicate a much earlier onset of glaciation of the North Sea Lobe of the British and Irish Ice Sheet in the region and a longer and more dynamic history. As such this work has important implications for understanding the wider glacial and deglacial history of the North Sea Basin.

Livingstone, S.J., Evans, D.J.A., Cofaigh, C.O. et al. (6 more authors) (2012) Glaciodynamics of the central sector of the last British-Irish Ice Sheet in Northern England. *Earth Science Reviews*, 111 (1-2). 25 - 55.