

Examples of the impact of formerly glaciated terrains on marine infrastructure projects in the North Sea and in the Baltic Sea

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Since 2016, Clinton Marine Survey has worked with large-scale windfarm surveys in various northern-European waters for some of the most influential wind energy companies. Being formerly glaciated terrains, the geological settings of these survey sites vary, and therefore bring their own challenges into the planning and progress of marine infrastructure projects.

Here we present a few examples out of context, which show some of our most interesting geological findings. For example, glacially polished bedrock outcrops in the North Sea yielded backscatter values lower than the surrounding sand, which brought unexpected challenges into cable dredging there. Relatively recent mass-flow deposits in the Baltic Sea highlights the importance of taking geohazard risks into account when planning and conducting marine infrastructure projects. Finally, an extensive system of paleo-channels in a ca. 40 m sediment record covering the last two glaciations under a flat and muddy seabed is another example highlighting the impact and importance of formerly glaciated terrains on marine infrastructure projects of today.