

Facts & Figures: Geotechnical Investigations

6 May 2011

- The aim of the geotechnical investigations is to obtain as comprehensive a profile of the soil conditions in and around the Fehmarnbelt as possible. These investigations are an important component of the planning work for the Fehmarnbelt Fixed Link.
- The first geotechnical investigations for the Fehmarnbelt Fixed Link were carried out in 1995/96 within the framework of a feasibility study.
- The geotechnical investigations for the project are being carried out between 2008 and 2012 on behalf of Femern A/S.
- The Rambøll Arup Joint Venture is managing the investigations as the geotechnical consultant. The investigations are being carried out by this joint venture and by other service providers.
- The investigations to date have demonstrated that, despite fairly complex soil conditions in the Fehmarnbelt, there are no geological or geotechnical obstacles to the construction of a Fehmarnbelt Fixed Link.
- The investigation corridor is east and west of the ferry ports in Puttgarden and Rødbyhavn and extends two kilometres inland from the coast in both locations.
- Bore holes make it possible to obtain information on the ground conditions down to a depth of 50 to 100 metres below the sea bed.
- A total of 60 deep bore holes were performed, 40 of these as double borings.
- Conducting large-area tests on the project site makes it possible to study the soil properties and the behaviour of the structural elements over several years under realistic conditions.
- In addition to geophysical measurements and bore holes on land and at sea, the construction of a project-specific Global Navigation Satellite System (GNSS) is also part of the programme.

Femern A/S is tasked with designing and planning of a fixed link between Denmark and Germany across the Fehmarnbelt. Femern A/S is a subsidiary of the Danish, state-owned Sund & Bælt Holding A/S, which has experience from the construction of the fixed links across the Great Belt and the Øresund.