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# The management of the planning phase of the Femern Belt Link

# 1. Introduction and conclusion

## 1.1. Purpose and conclusion

1. This report concerns Femern A/S and the Ministry of Transport's management of the planning phase of the Femern Belt Link leading up to the signing of the main tunnel contracts. Originally the design phase was set to take four years, but 11 years and six months passed from the start of the planning phase, before full scale construction could begin. The Femern Belt Link is one of Denmark's largest construction projects ever with a total budget of approx. DKK 53 billion (2015 prices).

2. In September 2008, Denmark and Germany signed a state treaty on a fixed link across the Femern Belt. Denmark undertook planning, financing, construction, future operation and maintenance of the link. At the time, the link was expected to open for traffic in 2018.

3. The Planning Act was passed by the Danish parliament in March 2009, and the Ministry of Transport placed the task of preparing, carrying out environmental impact assessments and planning the fixed link across Femern Belt in the government-owned company Femern A/S. The planning phase included obtaining approval by the relevant authorities in Denmark and Germany. In 2011, also the tunnel construction tender was assigned to Femern A/S.

The Construction Act was passed by the Danish parliament in April 2015 which was two years later than anticipated. With the adoption of the act, Femern A/S obtained approval by the Danish state to establish the Femern Belt Link. In May 2016, Femern A/S entered conditional contracts with a number of contractors worth approx. DKK 30 billion (2015 prices) and thus closed the tunnel construction tender for the largest contracts. The approval of the project by the German authorities was available on 31 January 2019, but did not enter into force until 3 November 2020, when complaints over the approval had been resolved/heard. Thus, full scale construction works were begun in Germany approx. eight years later than originally expected.

4. The study looks into Femern A/S's efforts to obtain approval by the German authorities and implement the tunnel construction tender. The reason is that the economy of the project might have been affected by the delayed German approval process and the fact that the tender and the authorities' approval process were interdependent. We also examine how the Ministry of Transport has assured the quality of Femern A/S' time schedules and contribution to the basis for decisions concerning the tender process.

### **The Femern Belt Link**

The Femern Belt Link is a large transboundary construction project which, with a fixed immersed tunnel link, is intended to improve the infrastructure between Denmark and the other Nordic countries and central Europe.

### **The Planning Act**

Act no. 285 of 15 April 2009 on the planning of a fixed link across Femern Belt including the hinterland projects in Denmark.

### **The Construction Act**

Act no. 575 of 4 May 2015 on construction and operation of a fixed link across Femern Belt including hinterland projects in Denmark.

### **Four large tunnel contracts**

Femern A/S invited tenders for four large tunnel projects:

- Dredging, establishment of work harbours and land reclamation for the new nature reserves
- Tunnel North
- Tunnel South
- Tunnel portals and ramps.

5. The purpose of the study is to assess whether the Ministry of Transport and Femern A/S have managed the Femern Belt Link planning phase in a satisfactory manner. The report answers the following questions:

- Did Femern A/S' management of the planning phase take into account the duration of the German authorities' approval process?
- Did the Ministry of Transport perform its tasks in the planning phase in a satisfactory manner?

Rigsrevisionen initiated the study in March 2021.



## Main conclusion

**The Ministry of Transport and Femern A/S' management of the planning phase of the Femern Belt Link has not been entirely satisfactory. The consequence is that the Ministry of Transport and Femern A/S have taken unnecessary financial risks in relation to the tunnel tenders.**

**Femern A/S' management of the planning phase did not take into account the duration of the German authorities' approval process in an entirely satisfactory manner**

Femern A/S' time schedules for obtaining approval by the German authorities in the planning phase were not robust. Femern A/S inquired into the duration and contents of the German process and was aware of the risk of an extended process. This knowledge was, however, not fully reflected in the time schedules. Instead, Femern A/S decided to work with ambitious time schedules that repeatedly turned out to be too tight.

Not all significant decisions made by Femern A/S concerning the tender took fully into account the risk of delays in the German authorities' approval process. For example, the recommendation made by Femern A/S in 2010 that the tender process should be implemented in parallel with the authorities' approval process entailed risks of delays. As did the decision made by Femern A/S in the summer of 2014 to let the tender run its course and request quotations for the purpose of the Construction Act. The decision made in 2014 increased the risk that the tender validity period would expire before the final German approval was available, which would impose costs on Femern A/S.

Construction costs were higher than expected in the bids for the tunnel work that Femern A/S received in December 2014. With the passing of the Construction Act, Femern A/S was therefore charged with the task of negotiating lower prices with the bidders. Following these negotiations, Femern A/S entered conditional contracts with the bidders that would become binding, only if the project was approved in Germany. Thus, the contracts provided tools for handling risks associated with entering the contracts, before the final German approval was available.

**The Ministry of Transport did not perform its tasks in the planning phase in an entirely satisfactory manner**

The Ministry of Transport had not allotted sufficient time to obtain approval by the German authorities at the time when the planning bill was presented in the Danish parliament. The ministry was aware of delays in the project and knew that the duration and contents of the German process had not been clarified. Yet, the ministry stuck to its goal of opening the Femern Belt Link in 2018.

Femern A/S' time schedule for obtaining approval by the German authorities was not subjected to adequate quality assurance by the Ministry of Transport. The ministry had information concerning the approval process that should have induced the ministry to be more critical of the time schedules.

### **Tender validity period**

The period within which bidders agree to keep their offers legally binding.

If the contracting authority accepts an offer during the tender validity period, the bidder is obligated to deliver in accordance with the contract.

Nor was the Ministry of Transport's quality assurance of Femern A/S' input to the decisions on the tender process entirely adequate. In 2010/2011, the ministry did not challenge the information provided by Femern A/S in the recommendation in regard to carrying out the tender in parallel with the approval process. Thus, the ministry failed to ensure that the consequences of further delays in the German approval process for a parallel tender process were clear.

The Ministry of Transport challenged Femern A/S' input to the basis for decision concerning conditional contracts, and the ministry contributed to clarifying the benefits, risks and costs associated with these contracts.