Styrelsen for Arbejdsmarked og Rekruttering

Analysis of the need to recruit and to upskill employees in connection with the construction of the Fehmarn Belt Link

Summary

The Regional Labour Market Councils in the Capital (RAR Hovedstaden) and in the region of Zealand (RAR Sjælland) have commissioned an analysis of the need to recruit and to upskill employees in connection with the construction of the Fehmarn Belt Link. The analysis was undertaken by COWI A/S over the course of the period from January to April 2021.

The analysis is based in part on COWI's model for calculation of the labour and employment consequences of infrastructure projects and partly on a series of qualitative interviews with labour market actors, education and training actors, sector representatives, professional organisations, etc., primarily from the area which is in the vicinity of the Fehmarn Belt Link.

Purpose

The purpose of the analysis is to investigate the demand for labour and the need for expertise which exists in connection with the Fehmarn Belt Link – both in connection with the actual construction work (direct need for labour) and the needs which will arise for subcontractors, suppliers of local services, etc. (indirect need for labour).

The final output of the analysis is thus an overview of the general training provision and the adult continuous vocational training provision that we consider relevant for implementation so as to ensure that those enterprises which either have or take on assignments in relation to this construction project will be able to recruit the workforce that they need.

Analytical reservations

The analysis has been carried out on the basis of current and available knowledge pertaining to the project. The project is only now commencing and labour demand will not begin to rise in earnest until 2023. There are therefore many uncertainties and unknown framework conditions associated with the analysis. This applies especially to the general labour market and economic situation which can alter the recruitment situation on the labour market, and not least to how the different consortia involved and their subcontractors will go about selecting and recruiting labour for the project.

The following sets out six conclusions of our analysis.

Conclusions

The first three conclusions concern labour demand for the Fehmarn Belt Link while the last three concern a broader labour market monitoring of the construction sector and initiatives which are related thereto.

Conclusion 1: It is expected that labour demand will be greatest in 2024–2027

The Fehmarn Belt Link will be the largest infrastructure investment in the history of Denmark. The project will run from 2020 until 2029. The actual construction work is expected to generate a direct demand for labour of up to 20,000 annual full-time equivalents (FTEs). Labour demand is expected to be at its greatest in the period 2024–2027 although the precise timings are uncertain. Indirect demand is estimated to be 22,000 annual FTEs.

During the initial stages of the work, employment on the Danish side is expected to be relatively high as many of the initial tasks pertaining to the project have been assigned to Danish companies. The long-term recruitment plans of the contractors involved are not yet known but as labour demand begins to rise dramatically over the coming years when the construction of tunnel elements is commenced, there will likely prove to be a need for both Danish and foreign labour.

Conclusion 2: There will be particular demand for experienced unskilled workers, drivers, blacksmiths, electricians and engineers

From 2021 to 2026, there will be great demand for unskilled workers for earthworks, concrete work on portals and not least for the soldering and casting of concrete elements for the immersed tunnel. From approximately 2026, there will be a growing demand for skilled labour – particularly electricians, blacksmiths, etc., for the assembly of installations, signal systems, etc.

The project will also require labour from a large number of subcontractors. Among other things, these will encompass wholesaling, construction companies, engineering

consultancy, local service (catering, accommodation, etc.) and transportation. Catering, accommodation, construction and transport in particular are expected to draw upon local enterprises and thus exert an effect on the local labour market.

Conclusion 3: Ensuring Danish labour for the Fehmarn Belt Link will be a local, regional and national effort

Local enterprises, job centres and educational/training institutions alone will be unable to meet all of the project's needs for labour and thus make full use of the potential that exists for Danish labour in the construction project. There is therefore a considerable need for collaboration and coordination on a regional scale and across the country. The challenge for the local labour market in the vicinity of the Fehmarn Belt and Rødbyhavn is a declining workforce which is expected to hit the construction sector in the coming years. The recruitment base among unemployed workers with the relevant skills and experience is limited and recruitment difficulties can therefore be expected both in relation to the Fehmarn Belt Link and within the local and regional construction sector over the coming years. Foreign labour will therefore play a role in connection with the construction work.

Conclusion 4: It is important to keep focus on both the ordinary construction labour market and on the Fehmarn Belt

We expect that Fehmarn Belt will attract some labour from the other construction companies in the country (locally, regionally and possibly also nationally). We therefore do not believe that the recruitment situation relating to the Fehmarn Belt can be considered in isolation but rather it must be seen in close relation to the wider construction sector. It is likely that recruitment opportunities relating to the Fehmarn Belt Link will mean a great deal of job transitions in the industry and that local and regional companies will experience the need to recruit and perhaps even recruitment problems as a result of job transitions among their employees.

It is therefore important that labour market and training efforts are directed at both the ordinary construction labour market and the Fehmarn Belt project. Focus should also be placed on generally expanding the workforce in the construction sector via more vocational training and by attracting people from the fringes of the ordinary labour market into jobs such as those which derive from construction of the Fehmarn Belt.

Conclusion 5: There is a considerable need to increase access to vocational training

The declining workforce represents a serious challenge both to the Fehmarn Belt project and for the rest of the construction sector over the coming years. The recruitment base among the unemployed is highly restricted and it is therefore reasonable to expect further recruitment difficulties over the coming years.

The lack of workers with vocational qualifications on the national level and locally in Zealand and the municipalities around the Fehmarn Belt Link may develop into a considerable problem. Access to vocational training has been in decline over recent years and across the entire country, and so difficulties recruiting electricians, plumbers, carpenters, bricklayers, blacksmiths, etc., may prove to be considerable. There is therefore a need to both highlight training opportunities and the positive employment opportunities that exist in this sector and to continue with efforts aimed at both motivating young people to take up vocational training and at motivating enterprises to establish apprenticeship positions.

The need for training initiatives already exists for the construction sector in general where there is a high level of demand for skilled workers. The Fehmarn Belt Link will also raise demand for skilled workers, especially from 2026 on.

Conclusion 6: Labour market monitoring and a training preparedness plan need to be maintained.

At the present moment it is not realistic to establish a training and recruitment plan for labour for the Fehmarn Belt Link. However, we believe that it will be absolutely crucial to maintain and develop the formalised and constructive frameworks for ongoing contact between contractors, the Femern Agency, vocational colleges and the labour market councils and to establish a preparedness plan to launch vocational training at relatively short notice in order to aid recruitment to the Fehmarn Belt project and within the general construction sector. The Femern Agency, Femern Bælt Development, the local job centres, the regional labour market councils and offices and, among others, the Centre for Vocational Training in Lolland Faster (CELF) will play a key role as part of this coordinating effort.

The labour market councils can implement relevant efforts to satisfy recruitment needs – both the labour needs for the Fehmarn Belt Link and within the construction sector. Efforts should concern a broad array of construction competencies which benefit the overall sector such as courses within concrete production, scaffolding, sewage works, operating machinery, paving, etc.

Converted into a tentative schedule, distribution of the phases and their intensity can be described as in Table 1. The darker the shading, the greater the demand for labour.

Table 1 Tentative distribution of labour demand over time for the construction phases

	2021	2022	2023	2024	2025	2026	2027	2028	2029
Project design and supervision									
Establishment and operation of construction site									
Building and construction tasks									
Production and assembly of tunnel elements									
Installation and assembly									

Table 2 Labour demand by job type and year

	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
Unskilled, construction workers	700	1100	1800	2200	2200	2300	1900	900	400	13,600
Electricians	20	20	20	40	80	200	200	250	120	950
Drivers	100	100	300	350	400	400	400	200	100	2,350
Blacksmiths, etc.	20	20	50	150	200	250	200	100	20	1,010
Technicians	100	100	40	40	40	40	40	40	40	480
Construction designers, etc.	170	170	30	30	30	30	30	20	20	530
Civil engineers	130	80	30	30	30	30	30	30	20	410
Other tertiary education graduates	50	50	20	-	-	-	-	-	-	120

Source: Statistics Denmark, searches via the so-called Research Machine (Forskermaskin) and independent calculations
Nb: "-" indicates a figure lower than 20