

## **Background Report – Analysis of Effects on Tourism**

*'Impact of the Fehmarnbelt Fixed Link on Supply and Demand in the Tourism Segment on the Island of Fehmarn and in the Municipality of Großenbrode'*

This report summarises the core statements and the background of the 'Analysis of Impact on Tourism - Impact of the Fehmarnbelt Fixed Link on Supply and Demand in the Tourism Segment on the Island of Fehmarn and in the Municipality of Großenbrode'. The report was commissioned by Femern A/S in spring 2009 and produced by independent scientists at the Institute for Tourism and Recreational Research in Northern Europe (NIT) under the leadership of Dr. Dirk Schmücker. The study is based on specially developed methods that were evaluated by Prof. Dr. Hansruedi Müller (University of Bern).

### **1. Background**

The Fehmarnbelt Fixed Link will link the German island of Fehmarn to the Danish island of Lolland from 2020 and will, according to the current state of the planning, consist of an immersed tunnel just under 18 kilometres long with a twin track, electrified railway and a four-lane motorway. The link will mean a major reduction in the travel time across the Fehmarnbelt. Instead of the current time of at least 45 minutes (this is the crossing time for the ferry link and does not include loading and unloading times and any waiting time), after the opening of the tunnel, users will only take around 7 minutes by train or just over 10 minutes by car from the German coast to the Danish coast.

Ostholstein in general, and Fehmarn and Großenbrode in particular, are highly characterised by tourism as the main branch of industry. Within the framework of lists of requirements from the District of Ostholstein, the Town of Fehmarn and the Municipality of Großenbrode, repeated demands have therefore been made since 2007, with the support of the Land of Schleswig-Holstein, to minimise any dangers to tourism in the region both during the construction phase and after the fixed link has been taken into use in 2020. To this end, supplementary, more in-depth studies on the specific effects of a Fehmarnbelt Fixed Link on the regional tourism industry should be carried out before the start of construction.

Femern A/S acknowledges the importance of tourism as the major branch of industry on Fehmarn and in Großenbrode and therefore supports these efforts by the region to identify and mitigate adverse effects and look for future opportunities. The independent scientific report presented meets the above demands from the region and is part of this voluntary commitment on the side of Femern A/S.

### **2. Character and aim**

The 'Analysis of Impact on Tourism' is an offer by Femern A/S to the actors and persons responsible in the field of tourism on the island of Fehmarn and in the Municipality of Großenbrode. It is designed to help develop strategies, on a solid data basis and supported by scientific assessments, with which opportunities for tourism arising out of the Fehmarnbelt Fixed Link can be used and risks can be minimised.

The report is an independent scientific study that is made available by Femern A/S to the interested general public as a stand-alone report. It reaches sovereign conclusions on the basis of NIT's own surveys and studies. Femern A/S also made available to the report's authors the latest available state of the technical planning and data and test results (September 2011).

Such a large infrastructure project always has effects on the immediate environment and thus also potentially on the tourism in the region. Within the framework of the German planning approval procedure for the Fehmarnbelt Fixed Link, recreation activities in the natural landscape are therefore one of the themes of the Environmental Impact Assessment (EIA). Within the framework of the EIA, the natural foundations for the use of space for tourism are studied, in particular the protected landscape, animals, plants and waters.

The 'Analysis of Impact on Tourism' commissioned by Femern A/S and produced by NIT in the period from 2009 to 2011 also studies the previous growth in tourism supply and demand, the perception of visitors and non-visitors and the expected impact of a Fehmarnbelt Fixed Link on the growth of tourism on the island of Fehmarn and in the Municipality of Großenbrode.

The study area (island of Fehmarn and Municipality of Großenbrode) corresponds to the maximum area that, during the construction and operation phases, can be affected by impacts *emanating directly from the Fehmarnbelt Fixed Link as a structure*. However, the possible impact of the development of the hinterland transport connections on the German side was expressly not studied as this does not come under the area of responsibility of Femern A/S.

The tourism study was commissioned in 2009. During the production, however, it became evident that the technical draft plans for the route and the structural designs of the tunnel and bridge alternatives must first be developed to such a level of specification and maturity that their material impact on tourism could be estimated on the basis of actual data at all. This meant that any further work on the report had to be suspended for about one year from spring 2010 to mid-2011 to await a further concretisation and maturation of the project planning.

Benefitting from this pause, the analysis was then able to also take into account study results from other relevant planning documents as well as specialist reports that were respectively delivered to NIT by Femern A/S for inclusion into the analysis process. This concerned areas such as bathing water quality, noise and air emissions, and navigational

safety. In particular, it was necessary also, in view of the intended level of specification of this report, to wait for the plans for the construction site and the future road network and the decision about the location of the production site for the tunnel or bridge elements. As a result, it was not possible, as originally planned, to complete the report in 2010. However, the report does now have the appropriate level of specification for the high importance of the subject.

The 'Analysis of Impact on Tourism' thus reflects the current state of planning for the Fehmarnbelt Fixed Link, i.e. the political backing by the Danish parliament of the recommendation of an immersed tunnel as preferred technical solution (February 2011), the choice of Rødbyhavn as the location for the production site for the tunnel elements (May 2011) and the current state of evaluation of important investigations and studies.

The results of this tourism study will be integrated in the relevant documents of the plan approval process in Germany, for instance in the EIS. The preparation of these plan approval documents is still in progress. This means that the plans and findings may still change. When considering whether the present 'Analysis of Impact on Tourism' should be published only when no more changes to the plans can be expected or now, allowing the region to discuss the results and to take account of them in its own development strategies, the latter option was preferred.

The conclusions of the report are thus fact-based, qualified, scientific assessments that reflect the current state of planning and studies, but do not represent guaranteed forecasts. With such a complex system as the growth of tourism in the future, this would be possible only to a limited extent anyway.

### **3. Task of the study and data basis**

The report studies in detail the impacts on the growth of tourism on the island of Fehmarn and in the Municipality of Großenbrode *emanating directly from the Fehmarnbelt Fixed Link itself* during the construction and operation phases. The construction works, construction sites and structures for the expansion of the hinterland road and rail connections for the link on the German side, for which other project developers are responsible, are expressly excluded.

The report is based on the following sources:

- Empirical surveys by NIT (survey of more than 1,000 day and overnight guests as well as conduct of focus group interviews (both in 2009), reference case analysis of other links)
- Available data on tourism in the study area (statistics, concepts, studies and surveys)
- The present status quo of the technical plans for the immersed tunnel and cable-stayed bridge by Femern A/S

- Results available to date from relevant studies by Femern A/S within the framework of the study programme for the EIA, on navigational safety, etc. (as at September 2011)

An extensive qualitative and quantitative situation analysis of the tourism products and services available and the demand situation for all relevant target groups in terms of volume and structure forms the basis of the description and assessment of the expected effects on tourism in the study area. On this basis, the report authors estimate the net product from tourism on the island of Fehmarn and in the Municipality of Großenbrode.

Based on this situation analysis, the expected effects on tourism are then determined, described and evaluated. This is done using the four fields of impact:

- Construction phase (tunnel and bridge)
- Tunnel structure
- Bridge structure and
- Reduction in travel time.

To this end, opportunities and risks that can be derived from previously identified hopes and fears of visitors, tourism actors and other participants are studied in detail.

In conclusion, three possible growth lines (positive, average, negative) are developed within the framework of a qualitative scenario examination. These scenarios show the tourism actors in the region courses of action that can be used for future strategy development.

#### **4. Central results**

In the following, the most important findings of the report are grouped thematically and summarised.

- 1. The construction and operation of the Fehmarnbelt Fixed Link involve both opportunities and risks for the growth of tourism on the island of Fehmarn and in the Municipality of Großenbrode.*

The construction of a major infrastructure project such as the Fixed Link across the Fehmarnbelt always has an impact on the surrounding area. During the construction phase (2014–2020) there will be some disruptions and effects, but outside the touristic core zones and mostly limited to the area of the tunnel portal construction site itself, i.e. east of the harbour in Puttgarden. As outlined below, there are also several opportunities for the development of tourism in the investigation area, e.g. the attraction of new tourists groups through the construction of the tunnel and after the completion of the project due to a better accessibility. Considered alone, however, the project is not estimated to be either a boom factor or a strong hindrance for the growth of tourism.

2. *The communication of realistic effects and positive perspectives of the Fehmarnbelt Fixed Link forms a decisive determining factor for in- or decrease of tourism during the construction phase.*

In the estimation of the report authors, communication has an even greater impact on the growth in tourist demand than the changes in the tourism products and services on offer that are actually to be expected on account of the construction and operation of the Fehmarnbelt Fixed Link. "Communication" in this case comprises not only information by all relevant regional actors (tourism enterprises, associations etc.) via media but in particular also personal conversation with present and future guests on Fehmarn and in Großenbrode. This personal aspect of the communication is particularly important, as such conversations on site were sought mostly by those tourists with negative expectations about the Fehmarnbelt Fixed Link. The efficiency of this communication in general is all the more significant the earlier it starts and the more united it is being carried out.

If thus, in the image-forming communication of the region before and during the construction period, negative aspects (fear, risk, megalomania, transit region) are primarily highlighted or if there is no managed communication, a decline in demand can be expected. However, if positive aspects (openness, cross-border link, anticipation) are primarily communicated, this risk can be alleviated or even eliminated.

3. *The construction phase is a particular sensitive time for tourism development, yet there are no objective grounds to fear that it will have a lasting detrimental effect on tourism on Fehmarn and in Großenbrode – when handled diligently.*

Especially in advance of and during the construction phase (2014-2020), image-forming communication has a major impact on whether visitors decide to continue to choose Fehmarn as a destination. The construction phase is a particularly sensitive time because regular visitors who are lost during this period will presumably not automatically return to the region immediately after its end.

The scientists conclude that *objectively*, there is no reason to fear a loss of tourists due to the direct effects of the construction of the Fehmarnbelt Fixed Link: A diligent planning of coastal dredging can, for instance, ensure that such works do not impede the bathing water quality during the main summer bathing season. Consequently, this risk is being considered as low by the study authors.

Particularly during the construction phase, it will, therefore, be essential for those responsible for tourism in the investigation area also to exert positive influence on the *subjective perceptions, expectations and imaginations* of the present and future visitors. A particularly important communication channel will be in this context – as mentioned above – to engage them in a personal dialogue focusing on giving a realistic impression of the limited direct impact of the construction to their actual holiday experience.

The report also sees particular tourism potential in making the construction site itself a touristic site through an attractive exhibition centre that can attract a number of new day trippers.

- 4. During the operation phase the expected increase in traffic on Fehmarn and in Großenbrode will in itself not prevent most of today's tourists from continuing to spend their holidays in the area. The mere improvement of accessibility will, however, also not automatically result in an increase of visitors from the Scandinavian source markets. To realise this potential, additional activities to the existing touristic supply will be required.*

The evaluation of the 2009 visitor survey on Fehmarn and in the Municipality of Großenbrode clearly shows that, on balance, the respondents have no plans to avoid the investigation area in the future on account of the expected increase in traffic on the railways and roads via the Fehmarnbelt Fixed Link, even if many current visitors take a rather critical approach to this development. The increase in traffic alone will, therefore, probably not deter tourists in significant numbers.

For the operation phase for the Fehmarnbelt Fixed Link, a tunnel and a bridge are assessed differently. A tunnel structure is seen in itself as being not very relevant to the tourism growth of the investigation area. In the event of a (currently much less probable) bridge solution, however, the high potential of a bridge to be a regional landmark is countered by risks relevant to tourism such as the greater visual change in the landscape, which may be perceived to be detrimental by some visitors, more noise as a result of elevated traffic and a higher risk, in relation to the tunnel, of ship collisions.

The reduction in travel time allows the investigation area to be reached more easily from the Scandinavian source markets. For the Øresund region around Copenhagen and Malmö, with its around 3.5 million inhabitants, Fehmarn and Großenbrode will, in the future, be accessible within two hours. This creates the opportunity to expand the potential for day trips and stopover traffic.

To this end, however, the existing tourism products and services on offer on Fehmarn and in Großenbrode must be supplemented by specific relevant attraction factors and services and active, positive communication must take place. On the other hand, if only the current products and services are maintained or if the communication is primarily negative or unmanaged, no clear growth in tourism demand can be expected in this respect.

- 5. The local actors' (tourism enterprises, associations, etc.) level of action and proactivity has a direct influence on the extent to which the opportunities arising from the construction of the Fehmarnbelt Fixed link will be realised.*

As elaborated above, it is crucial for the realisation of the potentials and opportunities arising from the link that the local tourism players take the initiative in several fields: most prominently they need to ensure a united and positive image-forming communication already now to convince their guests of the low real impact of the construction works

on their holiday experience. In order to benefit from the potential of an increase in the number of day trippers from Scandinavia, the touristic offer in the investigation area needs to be supplemented by corresponding products and services, such as motels, restaurants and border shops close to the traffic axis.

Therefore, there are a number of opportunities for the region if those responsible become active at an early enough stage: If a proactive and positive approach is chosen, the opportunities can be realised, if a passive and negative strategy should be adopted, the risks will primarily dominate.

## **5. Role of Femern A/S**

Femern A/S is aware of the great importance of tourism as a branch of industry throughout Ostholstein and in particular on the island of Fehmarn and in the Municipality of Großenbrode, the study area of the 'Analysis of Impact on Tourism'.

For this reason, since the start of the planning phase for the Fehmarnbelt Fixed Link, the needs of tourism have been taken into consideration. Femern A/S will also use the planning opportunities available to the company to minimise the potential risks and negative effects on tourism on Fehmarn and in Großenbrode particularly during the important construction phase.

The experience from the construction of the links across the Great Belt and the Øresund shows that there are a number of ways in which the construction works on a major infrastructure project can be planned and realised so that the material needs of the adjacent region are taken into consideration. In the case of the Fehmarnbelt Fixed Link, these include, for example, safeguarding that, during the main bathing season in the summer, the bathing water quality at the beaches on Fehmarn and in Großenbrode will not be impeded by coastal dredging works for the immersed tunnel.

Femern A/S is prepared to participate, within the framework of its statutory tasks, directly or indirectly in measures to promote tourism in order to realise the opportunities of the project for tourism with those responsible from the region (politicians, administration, tourism associations and enterprises).

Femern A/S has, therefore, already been actively involved for some time with partners from the region in plans for the creation of an attractive exhibition centre within the framework of the construction site on Fehmarn. This centre can also continue to be used as an additional tourist attraction after the end of the construction phase. With the landfill east of the ferry port of Puttgarden, a new shore landscape will also be created which may increase the tourism potential of north-east Fehmarn.