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BAM Nelis De Ruiter bv

Kystdirektoratet
J.nr. 14/00157
03-03-2014

Dear Mr Versteegen,

Thank you for your unsolicited proposal for ECOBEACH as a system for coastal protection of the West Coast of Jutland.

As the Danish government's adviser on coastal protections we appreciate your offer, as we are always looking at new and more effective methods for coastal protection.

Summary of your proposal

You propose to install the ECOBEACH, which you describe on page two as the PEM-system, over a stretch of 110 km along the West Coast of Jutland including maintenance for 5 years, measurements, analysis and reporting. The cost for these activities is 6.4 million Euros/year excluding VAT.

The yearly results of ECOBEACH will be defined in comparison with the coastal condition at the beginning of the project. The time for evaluation is before the storm season. Success of ECOBEACH will be defined as:

- The average dune foot position over 110 km is stable or
- The average sand quantity over the 110 km on the beach 60-80 m in front of the dune foot is stable
- In 3 of the 5 years this performance is achieved

If there is no success; at the end of the project a percentage of the total project costs will be paid back according to the following subdivision:

- 0 year success of the 5 years: pay back 30 % of the project costs
- 1 year success of the 5 years: pay back 20 % of the project costs
- 2 year success of the 5 years: pay back 10 % of the project costs

The pay back has the following conditions:

- The parts of the coast which are already protected by the PEM system are not taken into account for your pay back
- There will be no manmade adaptations (adaptations?) on the coast during the project
- The maintenance (bypassing of sand) of the navigation channels is unchanged

- Sand for nourishments will be derived from existing quarries on the sea
- The lee side erosion of existing port entrances are excluded (the length has to be determined)

Danish coastal protection

According to the Coastal Protection Act, it's the individual land owners' responsibility to protect themselves from flooding or erosion. There are no laws or regulations that determine whether to perform a safeguard, and if so, to what level coastal protection is implemented. Coastal protection requires permission by the Danish Coastal Authority according to the Coastal Protection Act. Only coastal protection with well documented effect or which has been scientifically proven gets permission. However, tests with new methods for coastal protection can be permitted for a limited time along a limited stretch of coastline.

However, on central parts of the west coast protection began in the late 1800s and has since early 1980 been funded by both state and municipality in the so called "Fællesaftale". (An agreement between the state and the involved local authorities). Along this coastal stretch the state handles the planning, prioritization and implementation of coastal protection efforts.

The purpose of Fællesaftalen on coastal protection from Lodbjerg to Nymindegab is to prevent the hinterland from flooding due to a breach in the narrow dune system. Breaching is caused by erosion by waves that reach the foot of dune during storm surges.

There are two sustainable methods to prevent waves from reaching the dunefoot. One method is through establishing a wide and high beach that makes the waves break on the beach so wave run-up does not reach the dune foot. On an erosional coast the way to build a sufficient wide and high beach is to carry out regular beach nourishments.

Another method is to make the waves break on the bar offshore as can be seen in fig. 1. By doing so only minor waves will reach the beach which are too small to cause duneerosion.



Fig 1: Waves break first on the outer bar, then on the inner bar and finally on the coastline which prevent waves from eroding the dunes.

On an erosional coast the method used to build a sufficiently wide and high bar is to carry out regular shoreface/bar nourishments. Comparable to beach nourishments, this is the preferable one, because it is less expensive.

So in order to prevent dune erosion the amount of wave energy reaches the dune foot must be controlled. This can be achieved by controlling the dynamic coastal profile from dune top to the point from which wave breaking starts. In the "Fællesaftale" this point is defined by 6 m of water depth, see fig 2.

Translation to Fig 2:

Coastal retreat is an average of the retreat measured between the dune top and a depth of 6m.

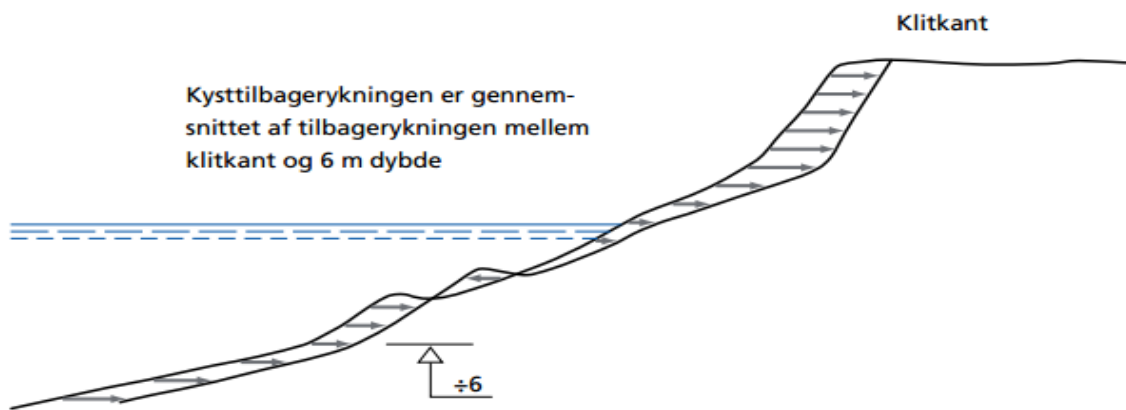
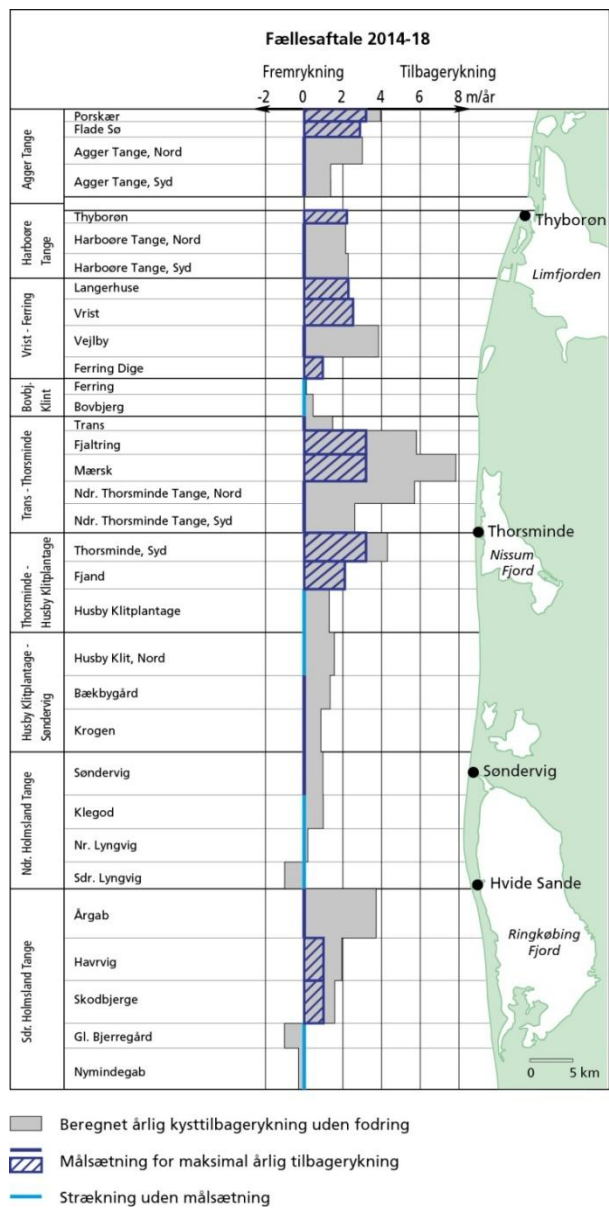


Fig 2: Definition of the control profile used to control waves energy

Because the coast between Lodbjerg and Nymindegab suffers from erosion, the eroded sand must be replaced by sand somewhere in the coastal profile between dune top and 6 meters water depth. To maintain these conditions, the common agreement on coastal protection includes a target for the volume of sand in this part of the coastal profile.

The aim for the present agreement is shown in fig 3.

Advance retreat m/yr



Translation to Fig 3:

Calculated annual coastal retreat without nourishment.

Target set for the maximum permissible coastal retreat.

Section without a target.

Fig 3: Aim for the movement of the coastal profile from dune top to -6m water depth based on the volume of sand.

Evaluation of the proposal

For the next five years the Danish state and the municipalities along the West Coast have made an agreement on the financing and implementation of coastal protection. The agreement carries through until 2018 and includes a safety level where the coast should withstand a storm which statistically occurs once every 100 years (in Thyborøn every 1000 years).

Your offer contains no such precautions. A refund on project expenses if the ECOBEACH method does not work is not relevant when compared to the costs and risks to human life in the case of a total dune failure during a storm. Furthermore, your offer states that 'there will be no manmade adaptations on the coast during the project' which prevents action from being taken to combine ECOBEACH with other coastal protection methods if the safety is reduced to below the agreed level.

The agreement between the state and the municipalities is based on the use of sand nourishment for coastal protection, as it is well documented. The process of EU tender for the contract period of 5 years has been initiated and the pre-qualification round has ended. BAM has not applied to be pre-qualified. However, your proposal to start negotiating about the PEM system without the EU tender is not relevant since your proposal is based on methods other than sand nourishment.

Furthermore, according to the EC Public Procurement Directive a protection of exclusive rights does not in itself justify the use of the negotiated procedure. It is also required that no equivalent can be offered by another provider. This has been established in a long line of case law from the Court of Justice of the European Union, see for example cases C-57/94 Ascoli Mare ("absolutely essential that the contract in question be awarded to the undertaking") and C-394/02 DEI ("absolutely necessary to award that contract to a particular contractor"). It is also made very clear in the new EU procurement rules that were just approved by the Parliament this month (where it is required that there is "no reasonable alternative or substitute"). As there are several different methods available for coastal protection, of which your solution is only one, it is not possible to award the contract without a prior public procurement process according to the EC Public Procurement Directive.

Along the part of the West Coast in question, the Danish Coastal Authority and Skagen Innovation Center (SIC) has carried out a test with the PEM-system between 2005 and 2008. The test was subject to an academic assessment conducted by two professors of which one was selected by SIC and the other by the Ministry of Transport. The assessment concluded that the effect of the PEM-system was not significant and therefore the PEM-system could not be used as coastal protection along the West Coast of Jutland. I have attached the report for your information.

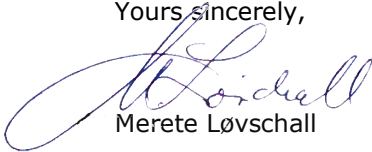
We have paid attention to the Ecobeach project since we learned that you had approached Rijkswaterstaat with the proposal of a test of the PEM system in the Netherlands. We have noticed that there are different interpretations of the results from the test in the Netherlands.

It is important that coastal protection along the west coast is carried out in accordance with the agreed safety levels. We do not consider it documented that the PEM-system should be suitable for the coastal protection of the West Coast.

Accordingly, on this basis we have to decline your proposal.

If you have questions or further comments, you are welcome to present them at a meeting here in Denmark.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'M. Løvschall', with a large, flowing initial 'M'.

Merete Løvschall

Director