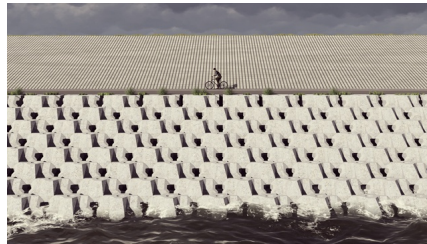
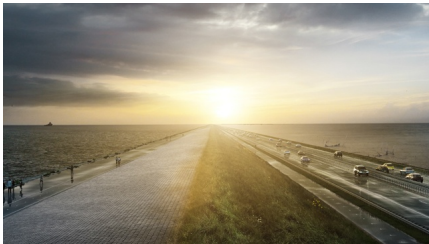


# DESIGNS FOR AFSLUITDIJK PRESENTED

23-04-2018



On Monday 23 April 2018 Rijkswaterstaat and Levvel presented the designs of the Afsluitdijk project to the media. In March of this year, Rijkswaterstaat announced that Levvel (a joint venture of Van Oord, BAM and Rebel) was awarded the Afsluitdijk project. West 8 is the Landscape Architect of Levvel's Design Team, which also includes Bentheim Crouwel Architects.

The Afsluitdijk has been an example of Dutch marine engineering for decades. The 32 kilometre long dam has protected large parts of the Netherlands since 1932 against flooding from the Wadden Sea and the IJsselmeer. After more than 85 years, the dyke is in need of renewal. Rijkswaterstaat strengthens the dyke, increases the discharge capacity and build pumps to transport more water to the Wadden Sea. On behalf of local governments, working together under the name De Nieuwe Afsluitdijk (The New Afsluitdijk), regional ambitions are also being implemented, including the denomination for a fish migration river and a bicycle path on the Wadden Sea side. Today's civil engineers are building on the legacy of Lely in a contemporary way while retaining the unique qualities: the Afsluitdijk will enter the 21st century as a new icon for Dutch marine engineering.

## **Reinforcement of the Afsluitdijk**

On the Wadden Sea side, the causeway will be raised and reinforced with new facing. For this work, the consortium will use 'Levvel blocks', innovative concrete elements that have been developed specially for the Afsluitdijk. Each block weighs about 6,500 kg, is extremely strong, has a wave retardant effect, and is easy to install. Some 100 blocks a day will be produced by means of a fully automated process in the port of Harlingen and transported by ship to the causeway. A pontoon crane will then be used to position the blocks, 75,000 in all. Because of their symmetry and the regular way they are positioned, the blocks have a tranquil appearance that reinforces the austere and autonomous character of the causeway. To protect the hinterland from the force of the water, the drainage locks will also be reinforced and two storm-surge barriers will be built.

## **Gravity discharge if possible, pumping if necessary**

The drainage locks at Den Oever will be expanded with new locks in between the island sections. This will allow more of the water that enters the IJsselmeer from the River IJssel to be discharged into the Wadden Sea. If the water level in the Wadden Sea is high, then natural drainage is no longer

possible. Therefore, two large pumping stations will be built in Den Oever. The pumps will operate with very low energy consumption and are fish-friendly. They will be powered sustainably by 2.7 hectares of solar panels near Den Oever. With these measures the Afsluitdijk can again withstand the force of the water until at least 2050.

### **A cutting for the fish migration river**

In order to restore the connection between the Wadden Sea and the IJsselmeer for migratory fish, a fish migration river will be constructed by 'The New Afsluitdijk', a partnership between the provinces of Friesland and Noord-Holland and the municipalities of Súdwest-Fryslân, Hollands Kroon, and Harlingen. This will be a 4 km channel surrounded by an ecological area accessible to visitors. Level will construct the necessary opening in the Afsluitdijk for the fish migration river.

### **Experience the Afsluitdijk**

The Afsluitdijk is a necessary construction, a protective barrier against the sea and a road link between two provinces. At the same time, it is a unique area much visited by tourists. To improve facilities for visitors, the New Afsluitdijk partnership has developed a number of initiatives. An additional cycle path will be built along the full length of the dike on the Wadden Sea side. The area around the striking monument designed by Willem Dudok will be upgraded and made more accessible to the public. The present pedestrian bridge will be relocated so as to reinforce the vertical character of the monument (a unique feature on the dike). At Kornwerderzand there a new walking trail will be added, allowing people to access the fish migration river.