



Improvement work on the Afsluitdijk: Holcim Coastal supplies new Quattroblocks

Alphen aan den Rijn/Hamburg (11.01.2019) – A major project for Holcim Coastal B.V.: for the Dutch renovation project Afsluitdijk, the hydraulic engineering and coastal protection specialist will supply consortium Levvel with the newly developed Basalton Quattroblocks for the block facing of the dyke. In total, about 700,000 square meters will be covered by the Quattroblocks.

For the reinforcement of the Afsluitdijk, the causeway will be raised and reinforced with new facing. For this work, the Levvel consortium will use 'Levvel-blocs' - innovative concrete elements that have been developed specially for the Afsluitdijk - on the lower slope, and on the upper slope the newly developed Basalton Quattroblocks bij Holcim Coastal B.V. will be used. This stone facing material is a further development of the Basalton column, and its name is derived from its form in which four columns are linked together. It has already been proven in Delta Flume tests that the Quattroblock is 40 percent more stable than the Basalton column. As a result, a relatively low column height could be used in the design of the Afsluitdijk, which has major advantages in terms of durability, costs and practicability among others. Through the alternate use of low and high columns, ridges are created on the embankment so that overtopping is reduced and the crown height can remain relatively low. The innovative concrete columns from Holcim will be produced in Alphen aan den Rijn (NL) and transported to the Afsluitdijk by ship.

Icon Afsluitdijk

The Afsluitdijk has been an example of Dutch hydraulic 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. Comprehensive strengthening works are necessary for the future: the dyke will be significantly reinforced and its specifications will enable it to withstand a storm that could occur once in 10,000 years. It must also defy the forecast rise in the sea level. Rijkswaterstaat (part of the Dutch Ministry of Infrastructure and Water Management) will strengthen the dyke, increase the discharge capacity and build pumps to transport more water to the Wadden Sea. Today's civil engineers are building on the legacy of engineer Lely in a contemporary way while retaining the structure's unique qualities. The Afsluitdijk will enter the 21st century as a new icon for Dutch hydraulic engineering.

More information about the project can be found at www.deafsluitdijk.nl



Project planning

The extensive construction works for the necessary reinforcement of the over 85-year-old dyke should start in 2019 and will be completed in 2023.

Level consortium

The construction costs of the project amount to a total of some 550 million euros. The Level consortium comprises several firms – BAM (46%), Van Oord (46%) and Rebel (8%) – and won the final commission in the framework of a tendering process in March 2018. The contract with Rijkswaterstaat was signed in April 2018.

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