

PRESS RELEASE

Envisan completes innovative project in Vlassenbroek

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The Sigma Plan (with the S from Scheldt) wants to protect everyone living and working in the Sea Scheldt basin. This is necessary if you keep in mind the disastrous consequences of the floods of 1953 and 1976. Furthermore the climate is changing, the sea level is rising and the number of storms is increasing, which enhances the chance of flooding. Merely raising the dikes does not offer a sustainable solution. The river also needs more space. The Sigma Plan also incorporates a number of European obligations in relation to a natural reinstatement along the Sea Scheldt and her tidal tributaries. The Sigma Plan should guarantee the economic sustainability of the river, without hindering natural beauty of the Scheldt basin.

Changing physical conditions and new insights into water management have recently led to the update of the Sigma Plan. The Updated Sigma Plan 'Safety + Ecology' aims to meet the safety requirements and ecological needs of the Scheldt estuary. Various restoration measures were developed combining safety with river restoration, amongst others dike reinforcements, together with more space for the river, construction of flooding areas with or without a controlled reduced tide (CRT), development of non-tidal wetlands, ... Waterwegen en Zeekanaal NV (W&Z), a Flemish government agency, is responsible for the implementation of the updated Sigma Plan.

During the following 5 years, the implementation of the updated Sigma Plan will require the equivalent of an estimated 150,000 truck loads of construction material for dike raisings and the development of controlled flooding areas. While at the same time large amounts of dredged sludge will be removed to keep the Flemish waterways navigable each year. Research has shown that the greater part of the dredged sludge is environmentally acceptable to build or reinforce dikes and other dams. By linking the dredging issues to the realisation of large-scale projects like the Sigma Plan, the dredged material is put to good beneficial reuse and many trucks are kept from the road.





Compartment dike

Envisan, the environmental subsidiary of Jan De Nul Group, is currently finishing a 800m long compartmental dike that is part of the future flood area in Vlassenbroek, Dendermonde (Belgium). These works are taking place in the framework of the Sigma Plan, by order of 'Waterwegen en Zeekanaal', division Zeeschelde.

For this project the client has looked for an innovative solution through a general invitation to tender. The dike had to be built with dredged sludge from the tidal branch of the River Scheldt between Wetteren and Heusden bridge. This sludge was dredged and taken to Vlassenbroek directly by barges. Because of this approach more than 10.000 truck passages through the villages of Baasrode or Vlassenbroek have been avoided.

This soft material was used to build the dike. After reviewing a number of possible solutions, Envisan proposed to make use of 'Engineered Sediments', which involves adding the engineered admixtures to the dredged sludge to obtain the required strength and impermeability. By pumping the dredging sludge ashore from the delivery barges using a special pumping system the material was kept as dry as possible with the minimum impact on the local environment.

The combination of a competitive cost price, the large degree of reuse of the dredging sludge and the technically innovative character of the offer led to Envisan's selection as contractor. Envisan and Jan De Nul are expecting to apply this processing technique also to other projects in Belgium and abroad in the future.

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