



SAFE FLOOD DEFENCE SYSTEM THAT FOLLOWS RISES IN THE SEA LEVEL

# Afsluitdijk (IJsselmeer Dam) and WaddenWerken

BY HILKE FLORIS

Flood defence systems like dikes are essential for safety. This is particularly true for the Netherlands, which is largely situated below sea level. The Afsluitdijk, one of the most important primary flood defence systems in the country, no longer meets safety requirements. The solution: create salt marshes which follow rises in the sea level.

With traditional dike reinforcement, the 32 kilometre long Afsluitdijk would have to be raised several metres and re-clad, an extensive operation that would have significant consequences for the current cultural historic value profile. The WaddenWerken\* vision addresses the safety issue through sustainable, integral area development.

The plan entails the enhancement of the natural processes around the dike. The dike is not heightened, but rather widened on the sea side with salt marshes, the same overgrown salt marsh shallows that are commonly found in the Wadden area. The salt

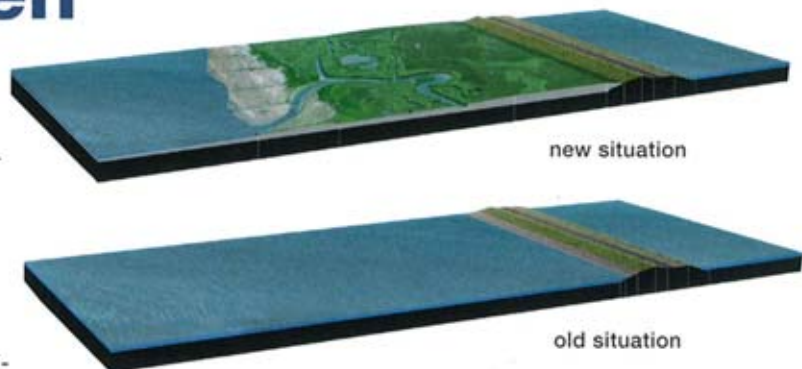
marshes create a foreshore to the dike and weaken the incoming waves. Natural silting allows them to follow rises in the sea level – up to more than one centimetre a year. This process can be easily accelerated by digging channels and creating brushwood dams. This growth is sufficient to create a sturdy and sustainable flood defence system that meets current and future safety requirements. The salt marshes can be created within the available budgets and require little maintenance, since they are part of the natural Waddenzee ecosystem.

The creation of these new salt marshes results in a new 1,500 hectare natural area that also offers recreational opportunities. The landscape experience is enhanced by constructing two tall bridges that enable a simultaneous passage of boats/shipping traf-

fic and road traffic and offer fantastic views of the Wadden Sea and IJsselmeer lake.

The WaddenWerken project is unique. Never before has a foreshore been created on this scale as part of a safety concept, while at the same time enhancing the natural values of the area and diversifying the landscape experience. The design respects the rich cultural history of the area by ensuring that the original Afsluitdijk remains recognisable.

More information:  
Hilke Floris  
+31 235317060  
h.floris@hospers.nl



\* WaddenWerken is a vision on the reinforcement of the Afsluitdijk developed for the Directorate-General for Public Works and Water Management by the consortium of the DHV consultancy and engineering firm, Wageningen IMARES knowledge institute and Bureau Alle Hoesper landscape architecture and urban development firm.