

# PROJECT SHEET

DEPOLDERING NOORDWAARD ROOM FOR THE RIVER

In 2000, the cabinet chose Room for the River as the starting point for a new approach to high water levels; a reversal in the way the Netherlands deals with water. Instead of further raising and strengthening dykes, the water gets more space. Safety and spatial quality are the main objectives of the Room for the River projects.

#### THE PROJECT

One of the projects within Room for the River is the Noordwaard Depoldering, on the Nieuwe Merwede, west of Werkendam and north of the de Biesbosch National Park. In five years, the polder has been reclassified and changed from an inner-dyke to an outer-dyke area. With the 1905 topographic map as a starting point, the old stream network was restored and ancient cultural-historical elements were accentuated, such as quays and dykes. In the flow-through area and along streams (new) nature can develop on a limited scale. The water in the polder is no longer protected by a primary embankment, but belongs to the river basin at water levels above NAP +2.0 metres on the Nieuwe Merwede. As a result of this, the water level at Gorinchem drops 30 centimetres.

#### DETAILS

Client	Directorate-General for Public Works and Water Management [Rijkswaterstaat]
Location	Werkendam
Period	2011 - 2015
Contractor	Combinatie Noordwaard
Type of contract	Design & Construct (UAV-gc)



A Boskalis working along the Nieuwe Merwede

B Top view of the final result





## DEPOLDERING NOORDWAARD

ROOM FOR THE RIVER

### TIDAL FORCE

Through the open connections with both the Nordklip Gate on the southeast side and the Nieuwe Merwede on the north side, the depoldered Noordwaard is now also under the influence of the daily tidal force.

#### WORK

The work carried out by Combinatie Noordwaard consists of:

- excavating wet and dry soil
- transporting and processing for streams, dykes, mounds, roads and waterways
- and performing various soil remediations.

For the purpose of this soil work, various houses, sheds and other objects have been demolished and trees and vegetation removed. In order to keep the entire polder accessible, a number of hydraulic constructions have been built, such as dyke bridges, stream bridges, pumping station syphons and decking. The roads have also been addressed. These include the removal of hardening and road foundations, construction of construction roads, various road layers in asphalt and pavements.

#### **OSIER DYKE**

A new dyke is being built around Fort Steurgat. This is a special dyke with (willow) osiers on the foreland. By planting an osier before the watercourse, a wave can be significantly broken and a lower dyke will suffice.

#### COMBINATIE NOORDWAARD

Combinatie Noordwaard consists of Boskalis Nederland, Martens en Van Oord, van Hattem en Blankenvoort and Gebr. Van Kessel.







- C Boskalis excavator at work
- D The inflow openings that let the water through the Noordwaard at a water level above 2.00 NAP+. This results in a water level drop upstream.
- F Jantjesplaat polder and the Biesbosch Museum.
  The Jantjesplaat polder was completed in September 2013.

Royal Boskalis Westminster N.V. PO Box 43 3350 AA Papendrecht The Netherlands

T +31 78 69 69 000 F +31 78 69 69 555

royal@boskalis.com www.boskalis.com