Boskalis
Dredging & Marine Experts

PROJECT SHEET

MOORDRECHT, NETHERLANDS
IMPROVEMENTS TO TRAFFIC FLOWS TO AND FROM THE A20 MOTORWAY

INTRODUCTION

The A20 is the main road link between Rotterdam and Gouda/Utrecht. Boskalis Nederland is at work near Moordrecht to make the motorway traffic smoother and faster, and in that way to cut traffic queues on the A20. Thanks to excellent planning, Boskalis Nederland was able to complete the work a year earlier than required by the client, Rijkswaterstaat.

OBJECTIVE

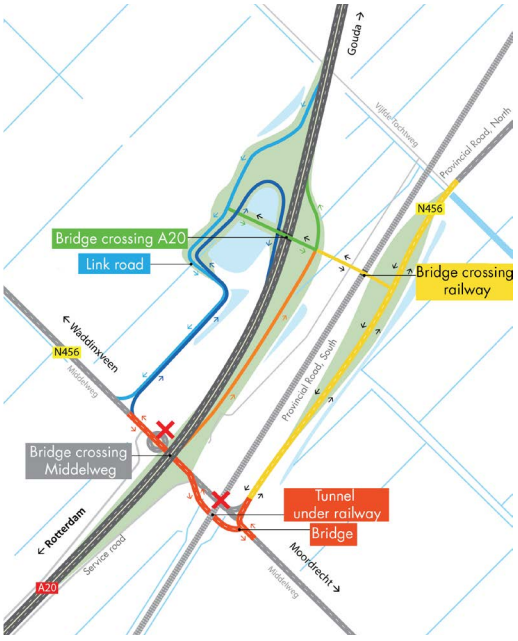
The Moordrecht motorway exit (junction 18) presents a safety challenge on the A20, and not only at peak times. The level railway crossing immediately after the exit blocks traffic flows from the motorway. The short entrance lanes to the motorway and large numbers of trucks driving to and from the haulage companies and farms located in the vicinity result in regular traffic queues on the A20. The project was established to further traffic safety by improving the flow of traffic and reducing queuing on the exit road and the motorway.

TRAFFIC SAFETY

In addition to improving traffic flows, the new link will make the traffic situation safer. Both goals will be achieved by eliminating the level road/railway intersection. It will be replaced by an underpass and a viaduct across the railway, which will also improve safety for cyclists. The provincial authority of South Holland and the municipal authority of Zuidplas have also stated clear objectives for this project. The provincial authority hopes the A20 link will improve the traffic flow between the A12 and the A20 with

FEATURES

Client	Rijkswaterstaat (Dutch Directorate General for Public Works and Water Management)
Location	A20, Rotterdam - Utrecht, N456
Period	January 2012 - mid-2015
Contractor	Boskalis Nederland
Type of contract	Design & Construct



A

B

A Location map
B Aerial photo from April 2014

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C The work in March 2014. The construction of viaducts, tunnels and bridges will improve traffic safety and cut traffic queues on the A20, and on entrance and exit roads. The energetic approach adopted by Boskalis Nederland means that the project was completed a year before the date set by Rijkswaterstaat

the 'Moordrechtboog' road link. The municipality wants access to the area to be improved.

ASSIGNMENT

Rijkswaterstaat, the client, is improving the situation by building eight engineering structures of various sizes (viaducts, tunnels and bridges), which will be built in phases. The works extend over a distance of four kilometers. The current Moordrecht exit will be replaced by a new one a few hundred meters away in the direction of the Gouwe intersection.

ROLE OF BOSKALIS NEDERLAND

As the lead contractor, Boskalis is responsible for the integral process and project management, and we are responsible for the day-to-day management of the work. Our role includes risk, quality and financial management, managing any amendments, and location management. Geo-engineering preparations such as calculating land settlement and the further elaboration of the provisional Rijkswaterstaat design were conducted in collaboration with the engineering firm Grontmij.

LOCATION MANAGEMENT

In the context of location management, there were contacts with many stakeholders: the provincial authority; the Zuidplas municipal authority; the HHSK water authority; Prorail; owners of cables, gas and water networks, and the local residents. Given the fact that the work resulted in some noise and nuisance for the local area, such as vibrations caused by pile-driving, equipment was installed in a number of homes to monitor vibration levels. A Location Manager has regular contacts with the local residents about the impact of the activities.

CHALLENGES

One of the challenges on this project was to install a complete 'prefab' viaduct in a single weekend. It was built at our own building site and then the entire 1,100-tonne structure was positioned in a single operation. In April 2014, the A20 was closed from Friday evening to Monday morning for the large-scale operation. The old viaduct was taken out and the new one was put in during the weekend. Because the new viaduct is almost a full meter higher, the A20 road surface was also raised over a considerable distance. And a large section of the road was also resurfaced.

RAPID COMPLETION

A robust schedule was drawn up, making it possible to deliver all the components on time and complete the work in mid-2015, a year before the completion date stated by Rijkswaterstaat in the tender phase. Boskalis Nederland scored EMVI points with the rapid completion of the project.

QUANTITIES

Asphalt	50,000 tonnes
Hydraulic mix aggregate	40,000 tonnes
Earthworks	1,000,000 m^3
Construction concrete	8,000 m^3
Underwater concrete	2,000 m^3
Armoring	1,900 tonnes
Traffic gantries	6

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