



Above all, the bridge had to be beautiful. For many years, the village of Koudekerk aan den Rijn had been blighted by the many cars and trucks travelling to and from the Hoogewaard industrial estate. The heavy goods vehicles were a particular nuisance to cyclists and pedestrians. A bridge over the Oude Rijn would considerably improve access and the residents' quality of life. But the ideal site was in the middle of the beautiful countryside of the Green Heart.

Royal bridge

FACTS

- The intelligent lighting plan enhances road safety. The low-energy LED lights can be dimmed so that the bridge is not lit up like a Christmas tree at night. Moreover, the lights do not disturb wildlife.
- The use of prefabricated concrete elements minimised the need for materials.
- The CO₂ emission was limited by transporting materials by water and engaging local companies.
- Working with prefabricated concrete foundation footings in the river bed minimised hindrance and congestion on the Oude Rijn.
- Direct contact with the surroundings, local residents and stakeholders created understanding and clarified everyone's expectations.

The client, the municipality of Alphen aan den Rijn, wanted a bridge that would add to the landscape and be sustainable. We did not disappoint. The slender design and the separate road decks give the Máxima Bridge a transparent and open appearance. Pedestrians on or under the bridge and passing it can enjoy the beautiful landscape and the Oude Rijn from observation points. *"It was a beautiful project, with an architectural presence,"* says Mobilis director Jan de Jong. *"We couldn't have delivered the bridge without the excellent cooperation of everyone involved."*

ENERGY NEUTRAL

The main contractor, Mobilis, realised the Design & Build project in cooperation with the construction company Van Gelder en Hollandia Infra. They were given a free hand as long as the bridge met the contract specifications. Mobilis commissioned Syb van Breda & Co Architects to design the bridge; wUrck, the landscape architect studio, was tasked with integrating it into the landscape. It was also responsible for landscaping the roads, including the energy landscape with floating solar PV panels.

The landscaping, integrated approach and demonstrable sustainability were persuasive factors in Alphen aan den Rijn's decision to opt for Mobilis and its partners. Their solution matched the municipality's sustainability ambitions. Recycled materials would be used wherever possible, including asphalt millings and noise-reducing asphalt. The bridge is also completely energy neutral. *"Solar panels have been built into the loop on the northern side to make the bridge energy neutral,"* explains project leader Rens Olij of Mobilis. *"We managed to reduce energy consumption by splitting the bridge deck and carefully positioning the counterweights to improve the balance."*

COOPERATION

The local authorities and local companies also worked closely together. Several companies contributed to the Máxima Bridge's realisation. Spanbeton, one of the firms housed on the Hoogewaard industrial estate, for example, supplied the prefabricated bridge beams. Reco, another Hoogewaard company, supplied the scaffolding. The use of local companies cut transportation costs and also reduced CO₂ emissions.

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The cooperation meant the Máxima Bridge could satisfy all the municipality's requirements. Not only cars and lorries but also pedestrians and cyclists can now cross the Oude Rijn quickly and safely. Apart from funding from the province, companies and municipalities also made a financial contribution to the bridge's construction. *"This project is a fixed link that has made a permanent connection,"* says De Jong.