

Tunnel under the Dordtsche Kil, Dordrecht

Client: Ministry of Transport, Public Works and Water Management, Projectbureau HSL-Zuid
Engineering: HSL Drechtse Steden v.o.f. (Design & Construct)
Realisation: BAM Civiel (in the joint venture "HSL Drechtse Steden v.o.f.")
Sum: € 206.159.000
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BAM Civiel

In the High Speed Railway Link in the Netherlands the rivers Oude Maas and Dordtsche Kil are crossed by means of immersed tube tunnels. The Joint Venture Drechtse Steden, in which BAM Civiel participates, designed and constructed the tunnels. The principal is Projectbureau HSL Zuid Zuid-Holland Zuid, part of the Ministry of Transport, Public Works and Water Management.

The cut-and-cover tunnel segments that form part of the entrances are built in cofferdams. Part of the southern entrance passes under a major highway. Naturally, during construction of the tunnel, no hindrance to traffic on this road was permitted.

The structural elements for the immersed part of the tunnel are built in a dock. This can be inundated to float the elements and allow transportation to the immersion site over water. For the marine operations, the open sides of the elements and the air openings in the roof are closed by temporary concrete bulkheads. The immersion operation is a true specialty. Not only the submerging itself, but also its timing with regards to the wind and tide and the negotiation of the window for sole use of the river. Once started, the process cannot easily be stopped. After the elements are put into place by means of a controlled immersion, the temporary bulkheads are demolished. The ballast water is replaced by a thick layer of ballast concrete to weigh down the tunnel and keep it in place.