

Second Benelux Tunnel, Rotterdam

Client: Directorate General for Public Works and Water Management, Zuid-Holland Directorate
Design: Directorate General for Public Works and Water Management, Building Division / W.A. van Boxsel (project engineer) / BAM Infraconsult
Construction: BAM Civiel bv (as consortium partner)
Contract value: € 221.118.000 (67%)
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BAM Civiel

The A4 west of Rotterdam is a major north-south road link. For years there had been a bottleneck where the motorway goes through the Benelux Tunnel under the River Maas. Subsequently the Directorate-General of Transport and Water Management (Rijkswaterstaat) decided to have a second tunnel built next to the existing one. This will add two more tunnel tubes to the current two A4 tubes. There will also be a variable direction road tube, a double underground rail tube, and a bicycle tunnel.

The Hollandse Combinatie Benelux (HCB) consortium has built the entrances in two combi-wall construction pits on the north and south banks of the Maas. Because space was very limited, the vibro-combination piles and concrete piles were driven in from pontoons. The excavated construction pits were still filled with water. Underwater

concrete was poured to form the blinding so that the pits could be pumped out. Construction of the actual tunnel entrance then began.

The tunnel consists of six submerged tunnel elements made in the construction dock at Barendrecht and transported by water to the Nieuwe Maas. The elements are lowered into a trench between the abutments and then joined and hermetically sealed using a rubber moulding and the action of water pressure. The tunnel is covered with a layer of sand and rubble and 'disappears' into the river bed. Once the end caps between the sections are removed and the interior is finished off, there will be a new road link under the Nieuwe Maas that will benefit a huge number of people.