

Rail Tunnel, Best

Client: NS Railinfrabeheer B.V.
Management: Arcadis Bouw / Infra
Design: Arcadis / BAM Infraconsult
Construction: BAM Civiel bv (as joint venture partner)
Contract value: € 52.300.000
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BAM Civiel

When the Den Bosch-Eindhoven railway line was upgraded from two to four tracks, the section of line that went through the built-up part of Best was put underground. The overall length of this rail tunnel (including entrances) is 2.6 kilometres.

The deep part of the tunnel consists of 200 metres of open trench and 900 metres of closed trench, both made of concrete.

Work proceeded in two stages. First, a two-track tunnel tube was constructed next to the operational tracks. The concreting was done in a construction pit with sheet pile walls. Following the installation of sheet pile structures, dewatering and the casting of piles in-situ, excavation was carried out in two stages to enable two layers of struts to

be positioned. The formwork used for pouring the floor, walls and roof partly exists of system formwork and partly traditional.

Once the first stage had been completed for the whole section, the existing tracks at ground level were extended to meet the tunnel tube. The adjacent tunnel tube was then constructed in the same way. To reduce noise as much as possible, the piles were driven in using high frequency vibrating hammers. And cast-in-situ encased auger piles were used for the foundations.

Both entrances are earth embankment structures. The deepest parts were constructed in sheet pile pits and incorporated a sealing film.