

# Monitoring of the High Speed Train Line in Rijpwetering, the Netherlands



Project nature: Monitoring  
Project: Monitoring of the High Speed Train Line in Rijpwetering, The Netherlands  
Client: Dutch Ministry of Public Works and Transport  
Fugro company: Fugro-Inpark B.V., the Netherlands  
Period: Summer 2006  
Project value: € 100.000

The northern part of the High Speed Train Line from Amsterdam to Brussels is founded on a settlement free plate, because of the weak nature of the soil in this area. Close to the village of Rijpwetering, a displacement of the settlement free plate was discovered after construction. Therefore, a dam is installed to strengthen the construction. During the installation of the dam and the tightening of the braces of this dam, an automated monitoring system is installed to detect possible displacements of the track.

The monitoring system consisted of a Leica 1201 Total Station, which was mounted on the concrete wall next to the track. This Total Station was continuously measuring the targets on the track. However the track is not yet fully operational, strict safety regulations were in force because there were some work trains on the track. Fugro personnel have been on site during the project, to assist the constructor by providing and interpreting the measurement results.

As can be seen from the graph below, some minor displacement has appeared in X-direction, which is the direction perpendicular to the track. However, the total displacement was well within the limits.

