

KARLSRUHE–BASLE RAILWAY, KATZENBERG TUNNEL



During the shield tunnelling for the new tube the vibration immissions with an overburden of 40 m were measured.

From these it was possible to derive a prognosis for the subsequent underpassing of Bad Bellingen with an overburden of approx. 25 m.

Directly above the tunnel shield perceptible vibrations may occur in habitable rooms. Peak levels (secondary airborne sound) of more than 35 dB(A) cannot be excluded.

Significant factors in respect of the vibration impacts which occur in adjacent buildings are the overburden, the distance between tunnel and building and the building's dynamic systems behaviour.



Railway Line Karlsruhe - Basle, Katzenberg Tunnel, Planning Approval Section 9.1, Germany

Project period
2005 – 2019

Services provided

Measurements of the vibration impacts during the shield tunnelling for the construction of the Katzenberg tunnel and prognosis for 15 buildings in Bad Bellingen. Preservation-of-evidence measurements were carried out on about 50 buildings in the area of the open line to document the vibrations before the extension of the line.

Technical details

Tubing Tunnel (inside diameter 9.4 m) with 24 h shield tunnelling through rock and conglomeratic layers
Four-track extension of the line outside the tunnel

