

# SUCCESS STORY

## VIBRATION ISOLATION

## Single-family house, Bad Endorf

## **PROJECT DATA**

#### **Brief description**

Vibration isolation of a multi-storey single-family house with Calenberg elastomeric bearings.

#### Requirement

Development of an economical elastic strip support of the building to protect residents from vibration and secondary airborne noise emissions caused by nearby rail traffic.

City, year Bad Endorf, 2024

## **PROJECT DESCRIPTION**

Several single-family homes have been built in the municipality of Bad Endorf, which are located in the immediate vicinity of a regional railway / suburban railway line.

The experts forecast high immissions from vibrations and secondary airborne sound and recommended an elastic building support with a tuning frequency of about 7 Hz.

# SOLUTION

Calenberg carried out an economic strip-shaped (and not fullsurface) solution with the bearing type Cibatur<sup>®</sup>. The strips were placed on the foundations of the outer walls and under the loadbearing interior walls. Cibatur<sup>®</sup> provides over a very large load range constant low natural frequencies. Therefore the differently loaded foundation sections could be equipped with storage strips of the same width. Subsequently, prestressed concrete hollow slabs were placed on Cibatur<sup>®</sup> and the joints between the slabs were cast without sound bridges.

