

Quadrio Prag – Measurements and dynamical building evaluation to define measures for reducing vibrations and re-radiated noise

Client:

HELIKA d.o.o

Country:

Czech republic

Duration:

from September 2013 to April 2014

Services:

Noise and vibration measurements, FE-calculations

Project objectives

Based on vibration measurements and FE-calculations measures should be defined to reduce the vibrations arising from a metro line in order to fulfill the limit values defined in the standard.

Project description

The client intends to build a mixed used object (office and residential) nearby an existing metro line.

Project data

16.400m² office area distributed on 6 floors, 8.500m² shopping areas, and a residential part with approximately 2.400m² area distributed on several flats.

Project specifics

Parts of the building were already finished so that the elastic bedding could not be placed below the foundation slab. The measures needed to be defined in a way so that they could be placed above the garage floors.

Services

In a first step vibration and re-radiated noise measurements were carried out to examine the level of imissions for the project state when we entered into the project. Based on the measurements and a FE- model of the planned building measures were defined. The measures basically consists of an elastic bedding above the garage floors. After finishing the shell construction final measurements were carried out to examine if the elasting bedding works properly according tot he prior calculations.

