

Planetarium of Silesia

Chorzów

Planetarium Silesia will change into the Silesian Science Park. The existing buildings will be modernized, and in addition a new building with an area of over 2.5 thousand m² will be built.



The project

Conducting works below the foundation level of the existing facilities required special foundation works to secure the modernized buildings. In order to reduce the hazards resulting from the works, and thus emergency situations, a system for monitoring the structure of the existing facilities was used.

The challenge

Installation and maintenance of a fully automatic structural monitoring system to provide ongoing verification of building displacement values and vibration values generated during excavation protection in the form of drilled pile piling and capture of existing foundations using micropiles.

The solution

In order to control vertical displacements of the Planetarium buildings and the auxiliary building, automatic monitoring based on the Hydrostatic Precision Leveling (HLC) system was used. The monitoring system is complemented by two additional adjustable vibration sensors. The whole measuring system consisting of several independent measuring circuits is operated by means of QuickView IT platform which provides 24/7 access to the recorded values in on-line mode via a web browser. The monitoring system provides for recording throughout the entire period of work related to the performance of specialized foundation works.

Project facts

Owner(s)

Silesia voivodship

Keller business unit(s)

GEO-Instruments Polska

GEO-Instruments UK

Main contractor(s)

Budimex

Engineer(s)

Jerzy Pieronkiewicz - Technical Director

Sam Kettle - Senior Monitoring Engineer

Services

Environmental monitoring

Deformation monitoring

Software and web-based data presentation

Markets

Buildings

Technologies

Hydrostatic levelling cells

Wireless sensors

Vibration and noise monitors