

Remote Monitoring Installation

Remote blast monitoring inside residential property



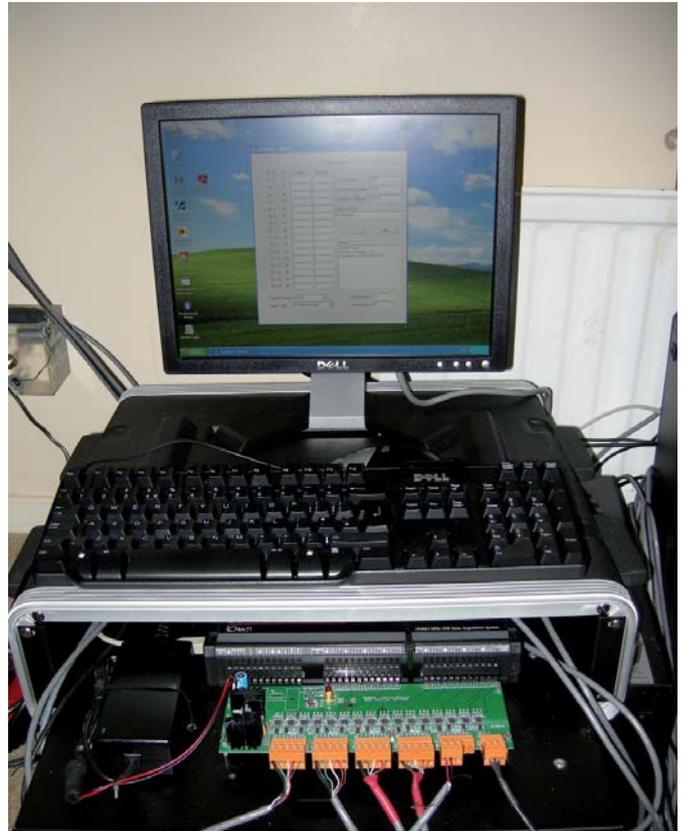
Reference: B-002

Project Details:

Location: Merthyr Tydfil, United Kingdom
Client: Miller Argent
Dates: 2008
Project Value: £20,000
Sector: Blast Monitoring

Brief Description:

Construction and installation of remote vibration and air overpressure monitoring system inside a residential property to record effects of blasting upon structures in close proximity to Ffos-y-fran reclamation project.



Detailed Project Description:

As part of the vibration monitoring scheme at Ffos-y-fran reclamation project in Merthyr Tydfil, South Wales, an extensive vibration and air overpressure monitoring system was installed at a house in close proximity to the site. The monitoring system consists of several geophone arrays mounted within the house and an air overpressure monitor mounted outside. The house in question is located south of the site, about 100m from the site boundary. Another geophone was installed close to bungalows 50m to the west of the site boundary, where the bungalows had been built above historic underground mine workings. The aim of the monitoring equipment is to enable the effects of blasting upon structures in close proximity to the reclamation project to be analysed in great detail. Should there be any complaints from residents that have experienced 'high' vibrations caused by the blasting; a detailed record of vibration and air overpressure levels would be available which would show whether the environmental impact in question was within planning consent limits and give information on from which mitigation measures could be designed.

The installation near to the bungalows to the west of the site boundary included a buried geophone array and an air overpressure microphone which is recorded on a White© seismograph.

The installation at the property to the south of the site comprised of three arrays mounted within the house, an air overpressure microphone and a triggering array. The custom built orthogonal geophone arrays were installed on the ground floor, first floor and in the attic of the property. To prevent excessive data arising from normal household activity, these arrays only measure the vibrations within the property after the external trigger array has recorded a vibration higher than the threshold designated by the client. The readings are then recorded on a computer within the property from which they can be remotely accessed and analysed through an internet connection.

Key contact:

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