Application Note:
SV 307 Noise Monitoring Terminal
SV 258 PRO Vibration & Noise Monitoring Station

On-line noise and vibration monitoring during demolition project

First Choice Hire Ltd supplied Tower Demolition Ltd (one of London's leading Demolition companies) systems for permanent monitoring of noise and vibration for a 13 week demolition project. The equipment included 4x SV 307 Noise Monitoring Terminals and 2x SV 258 PRO Noise and Vibration Monitoring Stations which worked together to monitor real-time pollution values.

Noise & Vibration at demolition site

In most countries, regulations are extremely demanding when it comes to air and noise pollution in residential areas, making the development of some projects a really challenging task. Among other things, the contractor needs to predict the noise and vibration levels at sensitive buildings and provide evidence-based advice on how to implement best practicable means as well as monitor the real levels of noise and vibration to ensure predicted levels are complied with.

The London Borough of Merton regeneration project consists of over 600 homes at High Path and a range of housing types from 1940s London County Council blocks to 1970s towers. By the end of 2020 the proposals for a new neighbourhood at High Path would deliver around 1,600 energy-efficient new homes. This includes replacement homes for all existing residents as well as a variety of house types including flats, duplexes, maisonettes, townhouses and multigenerational houses.



About First Choice Hire Ltd

First Choice Hire Ltd supplied Tower Demolition Limited (one of London's leading Demolition companies) systems for the 13 week period including 4x SV 307 Noise Monitoring Terminal, 2x SV 258 PRO Noise and Vibration Monitoring Station (Vibration only). "Having worked on numerous projects with them we were seen as the perfect fit." - stated Paul Dwyer



- Paul Dwyer, Director of First Choice Hire Ltd

One thing that sets First Choice Hire Ltd apart from the competition is that the company provides monthly site reports for both the client and the Local Authority/ Council throughout the duration of the project. This was a new client for us and the feedback from the project manager was excellent. Paul said that:

"The report we sent was perfect, clear and concise, with a lot more detail than both him and the client were expecting."

Another point that sets First Choice Ltd apart from the competition is that we also study and manage the systems throughout the duration of the projects. Using SvanNET which is "such an advanced and intuitive platform" this process has become easy and trouble free. SvanNET provides online connection services such as web interface, access to data files in the monitoring station or status alarms. The monitoring checklist includes measurement status, alarms indication, power source including battery charge, external power information as well as the GSM signal strength. This became an advantage when we noticed the onsite mains power was shutting off at the same time everyday. As mentioned in the press release we were able to contact the Project Manager immediately to find out why and if everything on site was ok. The internal batteries in these SV 307's enabled us to continue monitoring again without any worries.

Real-time monitoring

Where potential impacts are identified, measures to offset or reduce them should be incorporated in project but monitoring the real pollution values during the project is as important as deploying measures to offset it. **What is not measured can't be controlled.**

“THE REPORT WE SENT WAS PERFECT, CLEAR AND CONCISE, WITH A LOT MORE DETAIL THAN BOTH HIM AND THE CLIENT WERE EXPECTING.”



Using four SV 307 Noise Monitoring Terminals together with two SV 258 PRO Vibration and Noise Monitoring Station equipped with tri axial vibration sensors, the contractor kept full control of the noise and vibration levels during the whole project. We were able to demonstrate on-line thanks to SvanNET Cloud Service that those measured values were below the required ones.



- Svantek SV 307 Noise Monitoring Terminal

The SV 307 is a new generation of Noise Monitoring Terminal which integrates Class 1 sound level measurement with a modem in the removable waterproof housing. The SV 307 is equipped with a MEMS microphone with a lifetime warranty. Such a unique solution allows the system to meet all required standards and reduces the price of the station. Thanks to that it was possible to use four units on this project.



- Svantek SV 258 PRO Vibration & Noise Monitoring Station

Globally, rules and ordinances vary by country, state and municipality, which can make it tricky for contractors to stay on top of the current guidelines. Some cities’ guidelines are more stringent than others, but the new SV 258 PRO is a dedicated system for building vibration measurement that uses methods based on Peak Particle Velocity and Dominant Frequency. This allows the user to use predefined settings that are compatible with commonly used standards such as DIN 4150-3 or BS 7385-2 or configure a criterion curve based on FFT or 1/3 Octave analysis in accordance with local standards.

The measurement of human vibration in buildings is possible as the program allows simultaneous measurement of velocity and acceleration of vibrations with two independent steps of recording.

In addition, it is possible to enrich the measurement with Class 1 sound results.

“Being able to put your full trust in to a product’s capabilities is a Director’s dream. Even more so when the product is not with you but is in some remote location in the field for weeks on end. We cannot wait to invest in more equipment to add to our fleet.”

- Paul Dwyer, Director of First Choice Hire Ltd

“SUCH AN ADVANCE AND INTUITIVE PLATFORM” - customer about SvanNET

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