Client:

GRAHAM

Location:
Huntingdon

Featured Product Range:

Monitex Monitoring Solutions

Environmental Monitoring Solutions Installed at Hinchingbrooke Hospital During The Construction of a New Theatre Block

Project Overview

Hinchingbrooke Hospital has been providing health care for the people of Huntingdonshire and surrounding areas since 1983. The hospital has specialist wards, an emergency department, maternity unit and children's ward. Graham Construction were appointed to construct a new Theatre Block extension at the hospital, and they needed to ensure that the impact created by hazards such as dust, noise and vibration were closely controlled.

Challenge

The project involved demolition works ahead of the build which was situated close to occupied areas of the hospital. Nearby buildings had been constructed with the RAAC plank roof system – a build process used from the mid-1960's until the mid-1990's. As this form of construction is weaker than traditional concrete, any type of construction activity nearby could have been problematic.

Dust was also a concern due to the demolition works and the proximity of the air handling unit for the hospital. Any airborne dust could have been drawn into the system and contaminate the specialist filters. Also close by to the construction work is a children's ward where even minimal noise levels could have caused a disruption.

- The RVT team install and ensure accurate configuration of all monitoring equipment on site.
- Monitex Monitoring Solutions allow the user to view accurate, real-time measurements, displayed on graphs, schematics and 3D modelling.
- The reporting software is pre-configured based on the monitoring requirements. Trigger levels are configured to alert users to any breaches during monitoring.
- Monitoring noise, dust and vibrations levels is the only way to prove to local authorities that you are remaining within the specified limits.
- In addition to static units, RVT offer an easy-to-use hand held units for both dust and noise monitoring
- RVT's Monitex range is highly reliable, providing accurate readings as frequently as every second.

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Solution

RVT installed vibration monitoring at strategic points on the existing building to ensure that any vibration was maintained to a level whereby damage would not be caused to the existing building.

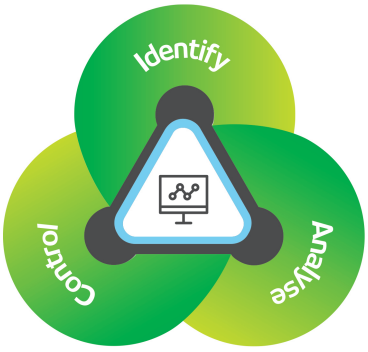
Dust monitoring was installed to provide real time monitoring of conditions so sufficient mitigation could be maintained. Again, these were set up at strategic locations close to the existing build and air intakes.

To ensure noise levels were kept to a minimum, noise monitors were installed inside the children's ward to provide the contractor with accurate real time information on noise levels within this environment.

How To Achieve Effective Environmental Monitoring

Monitor: Identify the activities being undertaken and whether noise, dust or vibration could pose a risk to the individual or the wider environment.

Manage: The HSE define maximum exposure limits over 8 hours, therefore handheld spot checks are not always suitable. Implement a continuous monitoring system and receive instant message alerts if pre-set parameters are exceeded.



Mitigate: If readings are outside the upper limits, you need to install adequate control equipment, such as noise barriers or dust extraction units. RVT are always on hand to advise you which hazard control equipment will be most effective.

During construction of the new theatre building at Hinchingbrooke hospital, an adjacent ward became a temporary Special Care Baby Unit (SCBU) created by the Trust. As the ward was directly adjacent to our progressing construction works, it was essential to ensure a monitoring regime was implemented to capture noise levels, to fully understand how much noise was being generated by the works, and identify any potential risks to the SCBU.

RVT installed a total of 4 noise monitors in rooms immediately adjacent to the construction site, enabling real-time data to be captured. This data meant that works could be planned and sequenced around the SCBU operation where possible. The noise monitors also tracked background noise levels, this was to provide base information, enabling accurate comparisons of noise levels of when works were being undertaken on site, and when they were not.

The monitors provided real-time data and were set-up to send automatic alerts, so we could monitor if noise was close to exceeding pre-defined limits. This meant that if required, changes could be made to construction works to keep the SCBU safe from noise hazards.

Senior Project Manager - Graham