metasphere
make data count

PORE WATER PRESSURE MONITORING |

SUPPLY OF REMOTE TELEMETRY UNITS

BACKGROUND

Pore water pressure is an important parameter in understanding the effects that construction may have on the ground, before, during and after any works are carried out.

STAKEHOLDER

A team of geo-environmental experts, **Ambisense** is an established solutions company which provides monitoring and analytic services covering a number of speciality areas.

BUSINESS NEEDS

Ambisense wanted to measure pore water pressure. Pore water pressure is an important parameter in understanding the effects construction may have on the ground, before, during and after any works are carried out.

Due to the scale of the site and the different points that need to be monitored, the solution needed to be a wireless solution where measurement data could be collected and transmitted autonomously.

Due to the varying nature of their work, **Ambisense** needed a cost-effective, easy-to-configure reliable logging and telemetry device that would support not only the range of sensors deployed in their markets, but also one that coud reliably transmit data to their data analytics platform, **Ambilytics**.

THE METASPHERE SOLUTION

The **Metasphere Point Orange** solution monitors pressure readings from boreholes located across the site. For this project, equipment at each monitoring point included a **Point Orange** datalogger coupled with a piezoelectric vibrating wire pressure sensor, via a vibrating wire interface.

The **Point Orange** dataloggers are configured to wake up every 15 minutes to monitor the level in the borehole, by reading the SDI-12 values from the vibrating wire interface. These measured level values are sampled and stored with timestamps in the datalogger.

The data collected is then transmitted to the **Ambisense** data analytics platform, **Ambilytics**, via FTP.

Point Orange is a self-contained datalogger/RTU (remote telemetry unit), with internal battery pack, IP68 unit enclosure, either a 4G (NB-IoT/ Cat-M1) or tri-band 3G modem, and quad band GSM/GPRS fallback, auto switching internal and external antenna options, software configurable AI, CI, DI, Modbus and SDI-12 communication options (including Multidrop), integrated submersion sensor, local diagnostic points and intelligent alarm reporting. It communicates with **Metasphere**'s Master Control System and web-based **Palette** data visualisation platform, DNP3/WITS DNP3 Masters or FTP/S servers.

Ambisense Ambilytics is a machine-learning and AI platform that utilises the power of collected data and analytics to provide real-time data analysis of multiple data sources, improving efficiency and outcomes in the world of environmental monitoring.

BENEFITS

The data and events generated by the **Metasphere** and **Ambisense** solution enabled the safety-critical data to be delivered quickly and efficiently to where it was needed most.

Ambisense was able to install units quickly in remote locations to provide the raw data needed for their Ambilytics platform.

The Point Orange coupled with the vibrating wire pressure transducer offered a lightweight, small-footprint solution, making use of M2M comms.

FIND OUT MORE!

If you would like to know more, get in touch to find out how **Point Colour** RTUs / dataloggers can transform your network.

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