Application Notes

Subject:	MetPak – Monitoring for weather & climate effects on stone structure
Reference	AN0021

Weather data provided by the Gill MetPak II Weather Station increases understanding of the effects of weather and climate on stone structures.



MetPak II Weather Station at Maltese Temple Site

Introduction

The Gill MetPak II Weather Station is being used as part of a comprehensive air monitoring system at a prehistoric temple site for the Maltese Department of Heritage, the government department responsible for the conservation of several Prehistoric temple sites on the islands of Malta and Gozo.

The monitoring programme is being conducted by the department to better understand how climate and weather affects the stone structures and will enable the department to identify ways of better preserving the temples for future generations.

System

The system was installed at the Tarxien Temples site on mainland Malta by Air Monitors Ltd, specialists in air monitoring systems. The project involved installation of sensors in and around the site, which wirelessly transmit data, in real time, over a cellular internet connection to a central data server in the department of heritage offices.

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Why MetPak

MetPak II Weather Station monitors wind speed & direction, temperature, humidity and atmospheric pressure.

Consisting of five Gill MetPak II Weather Stations that monitor wind speed and direction, temperature, humidity and atmospheric pressure, together with a number of complimentary sensors for solar radiation, soil temperature, soil wetness and water levels, the system has the ability to wirelessly transmit over 70 channels of data to an Envirologger Weblogger, which relays the information via a cellular internet connection to the central data server.

Integrator

Air Monitors managing director, Jim Mills said “The Metpak II’s ability to communicate digitally with our Envirologger data management system along with its low visual profile, low power requirement and proven reliability, made it ideal for this application. The entire monitoring network at Tarxien was designed to run entirely on low voltage solar power, an important consideration, as it was not possible to run cables around the site due to the detrimental impact on the temple structures.”