

Xilocastro Project – Highways Monitoring

CLIENT: Landmark

How remote condition monitoring helped investigate a Greek highway



Challenge

The Xilocastro Highway in Greece has been affected by a number of landslides which have caused significant disruption and present an ongoing risk to users. Despite several costly reconstruction programmes, continued deformation of the road surface and retaining walls was noted.

As part of the investigations aimed at understanding the extent and cause of the problem the asset owner chose to install a remote condition monitoring system.

The system had to be easy to install, as well as accurate, discreet and reliable.

Experts at local survey and monitoring company Landmark contacted Senceive to find a solution. Senceive technology has been deployed in challenging infrastructure projects around the world.

Solution

Senceive proposed monitoring the highway wall using their Nano+ triaxial tilt sensors. This wireless tilt node incorporates a highly sensitive triaxial sensor which can be positioned at any angle. It has no external aerial, making it less vulnerable to damage when deployed in a public space such as a highway.

The Nano+ nodes were securely fixed to the walls using a two-part mounting plate. The strength of this fixing and the durability of the IP-rated enclosure make it ideal for busy construction sites and allow functionality in the harshest of environment

Data from the wireless mesh network were transmitted to a solar powered 3G gateway, which was mounted to a nearby pylon. The gateway used the cellular network to transmit data to a secure cloud server, which could be viewed by registered users of Senceive's WebMonitor software.

Outcome

Nano+ triaxial tilt nodes are the ideal choice for this highways project, as they can be installed quickly and easily. This reduces man-power, time and costs. Senceive customer support team provided training and support throughout the project. Installation of



this reliable and robust system eliminated the need for further maintenance or visual checks. The system allows reporting rates to be adjusted remotely with no need for costly and potentially dangerous site visits.