Railway bridge monitoring in Ireland

CLIENT: IRISH RAIL

THE CHALLENGE
Irish Rail were concerned by the level and type of movement of one of the original pillars on the main Dublin to Cork line which traverses a fast flowing river.

Monitoring in such a remote location, with no power available on site and which was difficult to access presented particular challenges, particularly as it was required for a relatively short period of time.

Conventional monitoring was either just not feasible or very expensive.

OUR SOLUTION
A number of standard integrated FlatMesh tilt sensors were deployed around the pillar and on the underside of the bridge.

The whole job took half a day to install, despite demanding access issues. A solar powered GPRS gateway was used to provide data backhaul.

THE OUTCOME
The sensors were installed for four months and provided invaluable data on the movement of the pillar over the course of the day, through operational hours as trains passed over and through the changing of the seasons. This enabled a decision to be made on the long term viability and safety of the bridge. The bridge was replaced by a single span bridge as the monitoring results indicated continuous movement.