

RAILWAY EMBANKMENT MONITORING

CLIENT: NETWORK RAIL/QTS | **EAST MIDLANDS**



THE CHALLENGE

An existing railway embankment retaining wall was highly unstable and had broken in several sections. Network Rail LNE decided to replace it with a new more robust retaining wall constructed of steel rail sections and wooden sleepers. This wall is approximately 100m long. The new wall was to be monitored for movement and in addition they wished to minimize or eliminate unnecessary site visits with a dual system that would allow secondary corroboration of movement with camera images.



OUR SOLUTION

Senceive's standard FlatMesh v3 system was installed on the retaining wall with 10 high precision tilt sensors. These were mounted on the top of each wooden wall sections at @c.10m centers. Additionally, a remotely controlled 3G enabled camera was installed with a view of the most critical wall section, i.e. where there had historically been most movement. The 3G gateway and solar panel were mounted on the same pole.



THE OUTCOME

Continual monitoring of site health started on late December 2014. Data reporting is taking place every 30 minutes. Some small but not important slippage and deformation has been observed and the engineers from NR have been capable of taking the appropriate decisions based on the data supplied by Senceive's systems in a totally mains power and wire free solution.

