

## Radio surveys to improve mobile coverage in rural areas

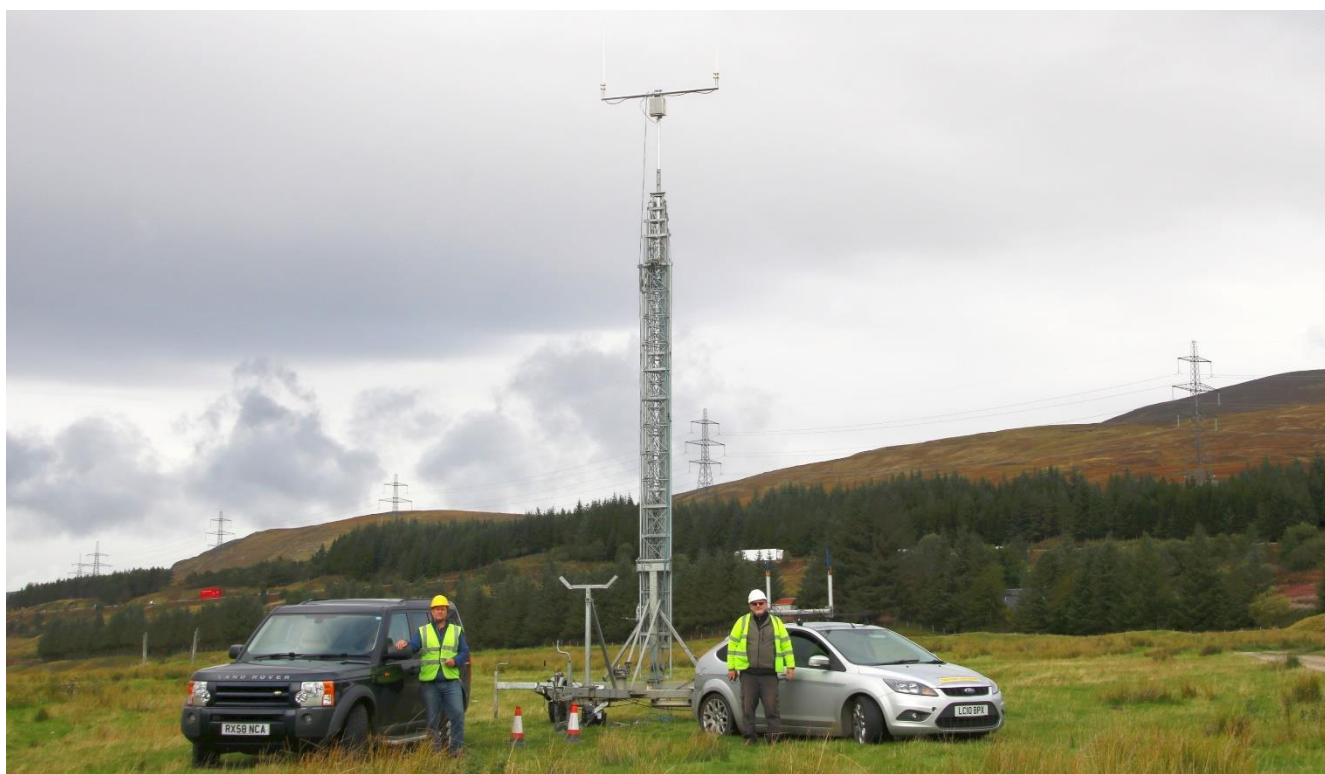
3<sup>rd</sup> Oct 2018

RSI has just completed a major radio survey project to measure calibrated signal strength at 21 locations across the UK for a mobile phone network operator. The purpose of the project was to make highly accurate measurements of signal levels in the 900MHz and 1900MHz bands in all types of rural terrain and clutter types which can then be fed into the propagation prediction process to improve the accuracy of future coverage predictions in rural areas.

In total, RSI surveyed over 10,500km of road producing over 1.5 million measurement samples. A temporary 25m trailer mounted mast was used at each hill-top location together with a custom-built transmitter unit. The survey vehicle used calibrated receivers and antennas controlled by specially developed software ensuring that all measurements were statistically valid. Great care was taken throughout the planning and execution of the surveys to ensure that the process produced accurate and repeatable data.

RSI Survey Engineers coped with all sorts of challenges along the way including agreeing access for the mast with the landowners and the more practical problems of putting up the mast in a field of livestock as well as narrow muddy lanes and high winds. Overall RSI was able to keep to an extremely tight measurement schedule even completing a few days early.

The benefits of the survey will be seen over the coming years as rural mobile phone coverage continues to improve with fewer 'not-spots' in the more remote areas.





### RSI – Company Background

Radio Systems Information Ltd. (RSI) is a UK based independent telecommunications consultancy with particular expertise in radio network coverage planning, design, verification, testing and measurement and specialised product development. RSI started trading in 1992 with most clients being large radio communication users and operators such as government, public utilities, emergency services, transport and energy. RSI has developed the Aries TETRA and Aries LTE survey tools for network performance measurement in the critical communications market.

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