

Case Study

Budget Project: Average Bungalow



About Us

Mobile Signal Solutions are UK based installers of commercial signal boosting systems, focused on improving mobile phone signals indoors.

Our professional team are approved installers of carrier grade equipment compatible with all UK networks. We work with the client from site survey to installation and offer maintenance & support contracts. Working together we ensure 100% network coverage, no budget overruns, and we offer upfront payment or leasing options.

Our main aim is that clients are happy to recommend us to others. Each system is voice and 4G compatible but we also future proof the design to carry other new mobile frequencies as they are launched e.g. 5G and 6G compatible systems.

The Property

The project involved an average-sized, standalone bungalow of approximately 2,000 sq. ft (around 200 m²), consisting of a single floor with internal walls throughout. The bungalow was equipped with a personal emergency alarm system designed to notify the family in case their elderly relative had a fall or required immediate assistance. However, the existing signal was blocked by the external insulation, and once the local 3G network was switched off, the already weak outdoor signal became unreliable, causing issues with the alarm system's connectivity.



The Challenge

The main challenge was that the bungalow's internal walls were obstructing the mobile signal, even from a central point. Additionally, the outside signal was extremely weak, with only 1-2 bars of reception, which was insufficient to ensure reliable connectivity for the emergency alarm system that relied on a SIM card to alert the family. The signal needed to cover the entire property, including all rooms, to ensure consistent communication in case of an emergency. The family required an effective yet budget-friendly solution, which meant using a lower-cost signal amplifier without compromising on performance.

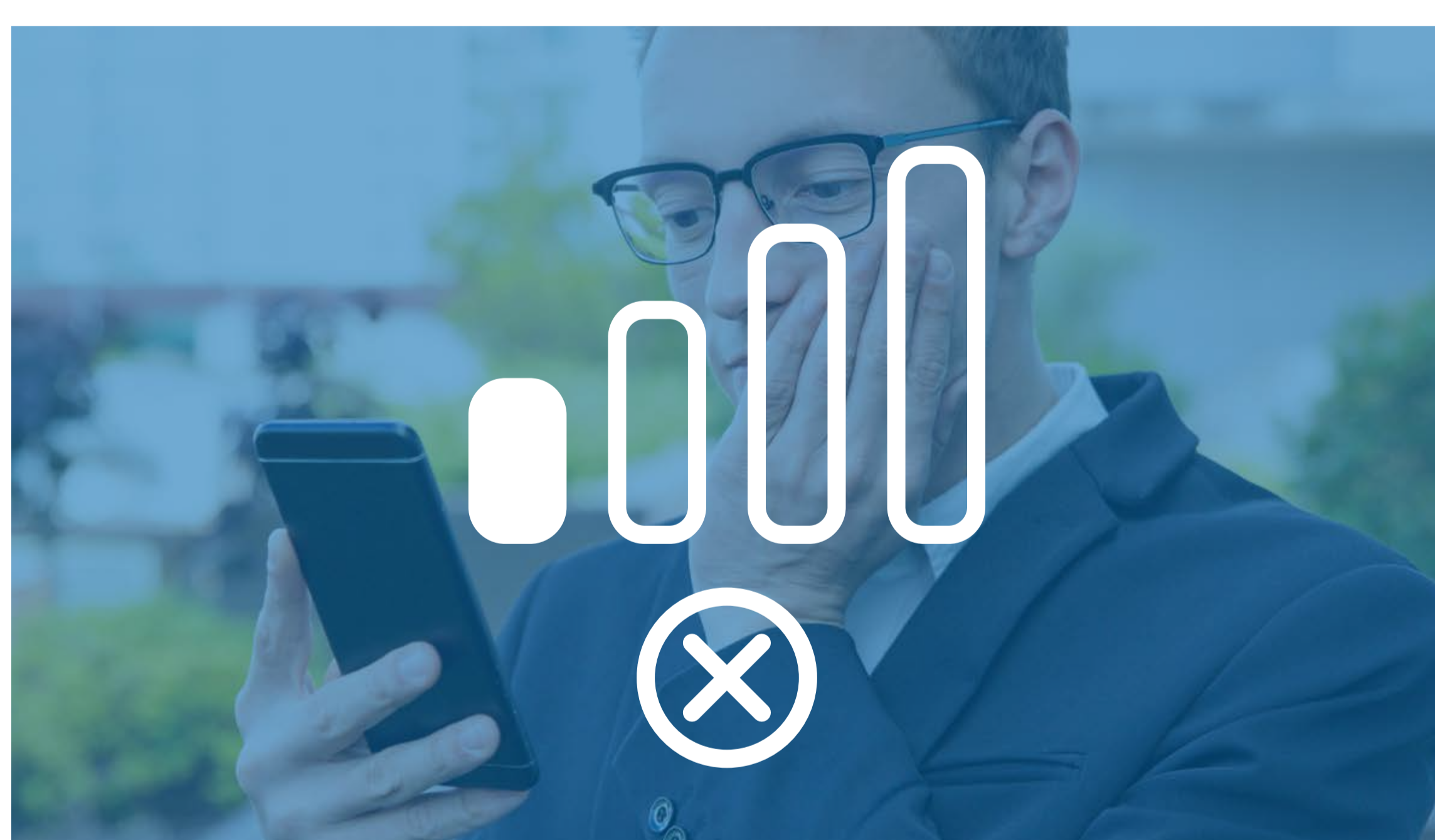
The Solution

To address the weak signal and internal obstructions, we upgraded the external antenna to a high-gain MIMO (Multiple Input, Multiple Output) antenna. Higher-grade cables were used to minimize signal loss over the short distance from the antenna to the amplifier. The stronger input signal allowed the amplifier to output a clear and robust signal throughout the property. While there was an option to install two antennas in the attic for extended coverage, it turned out to be unnecessary, as a single, centrally placed antenna provided full coverage for the entire bungalow.



The Results

The upgraded system delivered full signal coverage across the entire bungalow, ensuring the personal emergency alarm system worked flawlessly, giving the family peace of mind. In addition to the emergency system functioning properly, the elderly resident could now reliably stay in touch with friends and family via mobile phone. The project successfully provided full network coverage at a reasonable cost, proving that even a budget-friendly solution can offer comprehensive and effective results.



What Causes Poor Coverage?

Distance from the local base station or the construction of the outer walls are the main factors. Outer stone walls blocking signal is a common problem in many older buildings, due to the thickness of the walls signal finds it difficult to permeate indoors, especially in basements and areas with no windows.

In modern buildings, the high level of energy insulation also causes signals to be blocked. Buildings using foil backed insulation on roofs and walls, alongside variants of window panes where the glass contains metal particles to reflect the sun's rays means walls, roofs and windows all block the mobile signal.

Need A Solution?

If you're looking to improve connection across your site but aren't sure where to start give us a call today. Our team are happy to talk through your options and set up a survey.



Step One: On-Site Survey

You will meet with our surveyor to discuss your needs in full. You can discuss areas of importance and agree on a design plan for the system you require.



Step Two: System Design

Our surveyor will then design the best possible system. The surveyor will then meet with the operations team to put a cost together for that system.



Step Three: Installation

Before you know it we will have a team of highly skilled engineers on-site and your system will be up and running and providing flawless mobile signal throughout.

"I just wanted thank you for your help with getting the mobile signal boosted in my Mum's bungalow. The installation process went well and her fall protection watch is working well as well as her phone, both of which give us all increased peace of mind."

Colin Cochrane,
Home Owner

