

Case Study

NHS South Tees Hospital



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

This hospital was built in 1980 and opened as the South Cleveland Hospital by the duchess of Kent in 1981. In 1992 it officially became a Trust and in November 2000 Became South Tees Acute Hospital NHS Trust. With 1,024 beds spread over 2 floors, the building is 8500 sqm and has 8000 employees including temporary staff . With no mobile signal in over 85% of the building the Trust asked MSS to ensure both patients and staff had access to all UK networks in all areas of the building.

A survey & report of the existing signal levels carried out by MSS engineers in the Infectious Control Department in Teesside outlined a) The reasons areas had no signal b) Cable routes to minimise disruptions and c) Designed a system to cover over 95% of the area.



South Tees Hospitals
NHS Foundation Trust



The Challenge

The hospital constructed in 1981 had thick walls which reduce signal but the main issue was the recently added foil backed insulation that was blocking the mobile signal.

The main challenge for the team was the fact that it was a busy patient environment. The MSS team needed to work around clinic times, minimise any disruption and contain any dust generated. Great care was also taken to minimise noise levels and to be as efficient as possible in all work that was carried out.

The MSS engineers designed a custom solution to cover all 4 networks throughout the department covering both voice, 4G, 5G and future proofed to be 6G compatible.

Why A System Was Required

A duty of care to all patients extends to ensuring they are able to speak with loved ones throughout their stay, the Trust wanted to ensure they had easy access to be able to both make and receive calls while in the hospital. Being able to contact staff, especially in an emergency on their mobile in all areas of the campus was also important.



The Results

There is now full signal across all four networks – O2, EE, Vodafone, and Three in 96.7% of the building. The system also covered other virtual operators such as GiffGaff, Sky, Lebara, iD, Plus Net & Tesco.

A fully connected facility for all NHS staff and Visitors, which provides clear crisp mobile phone calls giving patients the connection to the outer world that's so important and ensuring all staff are easily contactable in an emergency.

Health & Safety has been greatly improved, patients' loved ones can give regular updates directly from the waiting room without having to stand out in the elements to make or receive a phone call.



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.

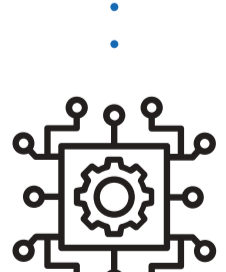
Need A Solution?

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.

"Really good experience with this company as the job was for the NHS from survey to installation the team were very professional. Would consider the company again for future works around the trust."

Rajbir, I.T Lead

