



CASE STUDY

AIRWAVE COVERAGE SOLUTION FOR EMERGENCY SERVICES AT HEATHROW

ABOUT AIRWAVE

Airwave is responsible for delivering mission-critical communications to the emergency services throughout the UK. A service which must remain operational even in the harshest of environments and situations.

The Airwave service is based upon TETRA 'Terrestrial Trunked Radio', an ETSI standard digital Private Mobile Radio (PMR) technology which provides the communication relied upon to keep emergency and public safety teams connected.

Airwave works in much the same way as a commercial mobile phone network, using transmitters to provide radio coverage across geographic areas of 'cells', with users maintaining contact with the transmitters through their radio devices.

24 hours a day, every day, Airwave's digital voice and data service is trusted by the emergency service teams, as well as other public safety agencies.

EMERGENCY SERVICES AT HEATHROW



Affini has been providing critical communication coverage solutions for over 35 years including at many of the UK's airports. So when Airwave were looking to extend coverage at Heathrow Airport, Affini provided the specialist knowledge and experience in both distributed antenna systems (DAS) and TETRA that would be critical to the project's success.

At Heathrow, with its myriad of buildings and physical infrastructure, an airport wide communication system needs extensive and detailed planning, by experts in radio frequency (RF) to achieve the required coverage and performance.

To ensure that their needs would be met, the end customer was in close dialogue with Airwave as the new network was being designed. Through this early involvement, Airwave soon concluded they would need a company with specialist knowledge and experience to deliver their customers' needs at Heathrow Airport. Airwaves natural choice was Affini.



COVERAGE FAR & WIDE

The Airport's coverage requirements were specified and this turned out to be almost everywhere!

As Affini was responsible for designing the system, it was down to them to satisfy the end customer that all the airside, landside, public & private areas had the coverage required. In fact, coverage was so important that the customer wanted to independently test the system. This was completed during the final commissioning phase to ensure it met their requirements were fully satisfied.

'Throughout the implementation they have been responsive and easy to work with... we have now awarded Affini the maintenance contract to ensure their comprehensive coverage is maintained, providing users with the highest levels of availability throughout the airport.'

- Martin Benke, Operations Director, Airwave

A CHALLENGING ENVIRONMENT

The network was designed to ensure that users have instant communication, even in remote areas and within the confined spaces of the building and tunnels, where radio coverage had often failed in the past. To make this a reality required Affini's in-depth skills and expertise in design and deployment to create and construct the wireless infrastructure, which was achieved on time and budget.

Due to the size of the airport, this was no minor undertaking. The network's comprehensive indoor and outdoor coverage is now operational in the following areas:

INDOOR COVERAGE

- All airport terminals
- Public car parks
- Pedestrian subways linking the terminals
- Airside road tunnels under the runway
- M4 spur road tunnel



OUTDOOR COVERAGE

- One rooftop macro cell onsite at the airport
- Seamless external coverage from neighbouring TETRA cells outside the airport boundaries

SUMMARY

The TETRA system at Heathrow remains fully operational and is the biggest indoor solution in the Airwave network. Affini has been maintaining the Heathrow and other critical coverage systems across the UK for over 35 years.