



# NATIONAL TRUST USING MOTOTRBO™ FOR ESTATE COMMUNICATIONS

DIGITAL TECHNOLOGY PROVIDES ENHANCED VOICE COMMUNICATIONS AND SIGNAL COVERAGE



To facilitate better communication among work teams at the Stourhead estate in Wiltshire, south-west England, UK conservation charity, National Trust has moved to a MOTOTRBO digital two-way radio platform. Covering an area of 10,7km<sup>2</sup>, the estate attracts over 300,000 visitors each year who come to see Stourhead's world-renowned landscaped gardens and the Palladian-style mansion which is home to a Regency library and extensive collections of furniture and paintings.

The estate management at Stourhead had been experiencing major problems with its existing two-way radio system; the most pressing being a lack of signal coverage, numerous dead-zones and poor quality voice communications. To ensure work teams would have a reliable and scalable communications platform to address their immediate and future needs, Motorola Solutions' partner, Direct Telecom Services proposed a MOTOTRBO digital solution. The system comprises a DR 3000 repeater base station, a DM 3600 mobile radio and 35 DP 3400 portable radios.

## **CUSTOMER PROFILE**

**Company**  
National Trust (Stourhead Estate)

**Industry Name:**  
Tourism

**Motorola Solutions Partners:**  
Direct Telecom Services

**Product Name:**

- DP 3400 portable radios
- DM 3600 mobile radio
- DR 3000 repeater base station

**Key Benefits:**

- Clearer communication and extended range
- Improved safety and security features
- Double channel capacity and scalability for growth
- Increased productivity and efficiency

## CASE STUDY

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**“We’re extremely impressed with the new MOTOTRBO digital radio system... everyone is amazed at how much better the overall quality is compared to our old system. We’ve tried out the emergency call and the lone worker options and both work really well.”**

Gill Harris, Senior Administrator, National Trust



## THE CHALLENGE

Maintaining the Stourhead estate is an enormous task and requires good radio communication between specialised work teams which are involved in everything from general gardening, forestry work, environmental practices, wildlife protection and water quality testing to conducting visitor walks throughout the estate and countryside.

However, providing radio coverage over such a large area requires a communications system that has the ability to deliver consistent and reliable coverage across many different types of terrain - from parkland to woodland - and varying elevations which can impact on signal strength and range. In addition to the estate mansion, there are also numerous large structures and buildings such as a restaurant, a farm shop, art gallery and an inn set in the heart of the adjacent village of Stourton – the construction of which have had an effect on radio coverage in the past.

Stourhead’s previous two-way radio system had been in use for many years but over time had become increasingly temperamental with the result that work teams were finding it hard to communicate. As the system also plays an integral role in the co-ordination of visitors from the car park to the estate and for group tours, the National Trust realised the need to replace the existing two-way radio system with a solution that would not only resolve its immediate communication needs, but one which would provide a reliable, robust, secure and scalable foundation for future needs.

## THE SOLUTION

The MOTOTRBO digital network is based around a central DR 3000 repeater base station and antenna system installed at the estate mansion - this had to be done discreetly as Stourhead House is a Grade 1 listed building of historic importance. Full-time staff and volunteer groups use a pool of DP 3400 portable radios while a DM 3600 mobile radio is installed in the estate’s visitor reception centre.

Voice communication has improved dramatically and radio signal is now available across the entire estate.

This is a result of MOTOTRBO’s ability to reduce signal interference and eliminate background noise for improved signal quality. MOTOTRBO also boosts radio spectrum efficiency by doubling channel capacity which means that more users can be supported when needed and more information can be transmitted on existing frequencies.

In addition to enhanced voice communication and signal coverage, it was important that the radios offered safety and security features such as easy-to-access emergency buttons and a Lone Worker option. These features are essential for Stourhead’s traffic marshals, visitor guides, shuttle bus operators and particularly those working in relative isolation across the estate such as gardeners involved in potentially dangerous operations, including tree pruning, hedge cutting and other large-scale maintenance projects.

## THE BENEFIT

The move to a MOTOTRBO digital two-way radio platform has improved operational efficiency dramatically in that Stourhead’s work teams can now go about their daily tasks knowing that they have robust, reliable and high-quality voice communications across the entire estate.

MOTOTRBO’s ability to double the calling capacity – by using TDMA technology to split a 12.5kHz channel into two channels for simultaneous voice conversations - means that more people can now communicate over the existing licensed channels without interference. This also lowers communication costs by reducing the amount of equipment required.

Ensuring the safety of staff and visitors across the estate is crucial. MOTOTRBO offers numerous features that are specifically designed to help organisations bolster safety and security across many different operations and situations.

Finally, Stourhead has a future-proof radio network that can be easily expanded to accommodate more users should the need arise while also providing a robust platform for data applications



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J1045\_NATIONAL-TRUST/CASESTUDY\_UK\_(09/12)

