

**TV white spaces beneficiary profile:**  
**Residents of Isle of Bute, Scotland**  
*Isle of Bute Rural Broadband Project*



**The Isle of Bute** lies off the west coast of mainland Scotland and has several rural properties with poor broadband connectivity. In April 2011, a six-partner consortium, with support from the UK government's Technology Strategy Board, started work on a rural broadband trial network that would use white space radio spectrum to provide broadband connectivity to a small community on the south of the island. A key aim was to investigate and demonstrate the potential of white space spectrum for providing broadband access to remote, difficult-to-reach rural areas in challenging terrain. The 18-month project involved the planning and installation of white space radio links from the local telephone exchange to eight premises in the surrounding area, as well as backhaul connectivity from the telephone exchange to the mainland and then on to BT's IP backbone for access to the Internet.



*The south part of Bute is rural and sparsely populated.*



*White space radio equipment at residents' premises.*

The residents have enthusiastically embraced the network for a wide range of uses related to working life, social life, leisure and recreation, online shopping, education, etc.

Many of the residents are farmers, for whom good internet access is becoming increasingly essential for up-to-date, real-time market information and for recording and tracking the movement of animals. A significant amount of official information has to be submitted on-line nowadays,

and farmers in remote rural areas have traditionally struggled to do this with poor broadband connections. The same is true for hotel owners, whose suppliers are pushing for orders of food and drinks supplies to be made online rather than by telephone or by paper-based forms. A local hotel owner explained that the white space broadband connection now allows him to place orders for food and drinks supplies online – something that he hadn't previously been able to do as the connection would often have timed out before he could complete the order.

The network is also being used for personal uses that include education and entertainment, as well as for keeping in touch with friends and family in various parts of the world. School children have been using it to access information for homework and school assignments, and some adult residents have been able to embark on distance-learning courses now that they have good broadband connectivity.

All in all, the network has proven the technical viability of using white space spectrum for rural broadband access, and the residents speak very positively about the broadband connectivity that they are receiving, and of the value that it has brought to their personal and business lives. When asked if expectations had been met as a result of the white space trial, one resident responded:

*"Very much so ... compared with what we had before, this is excellent."*