

CASE STUDY

Residents and businesses connect to robust, reliable wireless broadband across an area as large as 100,000 soccer pitches

The County of Cumbria lies in England's North West. A rural county, Cumbria is home to the Lake District National Park, one of the most beautiful areas of England. The mountainous area contains all the territory in England that is more than 3,000 feet above sea level, including the country's highest peak, Scafell Pike at 978 m (3210 ft). The rural nature of the county may best be understood by examining two statistics – Cumbria is England's third-largest county by land area but 41st largest by population.

For more than 10 years, Kencomp Internet has provided a range of ISP services – from traditional dial-up connections to fast broadband – across the region of Cumbria. In order to provide its customers with reliable Internet access, Kencomp connects directly to MaNAP (The Manchester Network Access Point) and Telewest Sheffield via optical links and copper backups.

"Having access to broadband can help improve the efficiency of local businesses and enhance local citizens' lifestyles. Services obtained via broadband can really empower a community's mobile workforce as well as attract and retain vibrant commercial development," said Paul Haig, Technical Director at Kencomp.

However, Cumbria, with its landscape of lakes and high mountains and its low population density, is very rural, meaning that wireline broadband network coverage does not reach the entire community. Whilst some areas can receive intermittent access, others cannot access wireline broadband at all. The only realistic solution to connect these remote areas of Cumbria involved rolling out wireless broadband technology.

The project to connect a greater number of Cumbrian residents to the Internet began in 2003, when Kencomp first deployed 100 wireless access points from one of Proxim's competitors. However, shortly after the initial deployment, Kencomp noticed a number of problems with the supplier's technology and set about finding a more reliable technology partner.

"Home and business users were unwilling to pay over the odds for fixed broadband lines to this remote area, so it was imperative that Kencomp deliver bandwidth through an affordable, robust, reliable and secure wireless broadband platform," explains Haig.

The decision to use Proxim's technology was taken because of the company's robust and highly reliable technology. "We needed to ensure that the wireless network we deployed was reliable and worked seamlessly. The core of our business is to provide our customers with a stable network – we can't afford for our network to fail or go down," Haig emphasized.

Proxim's rugged network units soon proved to be highly reliable and cost effective. Kencomp deployed Proxim's Tsunami MP.11, including the Model 5054 and the Model 5012-SUI. Following the deployment of 150 Proxim wireless network nodes over an area of approximately 270 square miles,



Kencomp met its main objective of providing seamless, cost-effective connectivity across the large, remote area.

Haig concluded, "Prior to the Proxim deployment, many communities in the most rural areas of Cumbria were not able to have access to broadband at all. We now cover 270 square miles and supply approximately 300 households and businesses with broadband. This greatly benefits small businesses and teleworkers, too, who typically rely on wireless broadband in order to do business."

The lesson of Kencomp is clear – extending broadband much further, faster, and deeper into rural communities in the U.K. and elsewhere cannot depend on wireline solutions alone. Wireless is required. By working with companies such as Proxim, rural service providers can offer wireless broadband to rural communities and local businesses that would normally be unable to connect to DSL.