



Broxbourne Council WiMax Link To Cheshunt Golf Club

Broxbourne Council resides in the leafy suburbs of rural Hertfordshire and has a number of outlying sites such as civic centres, sports centres, and One-Stop shops, which required connecting to the Broxbourne network and to the Internet.

Broxbourne's Infrastructure Manager, Mr. Mathew Hamilton, contacted Case Communications to look at the options available to provide these connections. The first two sites to be evaluated were from the Council's HQ to the Civic Hall and to Cheshunt Golf Club..

Case Communications looked at Ethernet first mile, local loop unbundling, fibre optic and wireless options and, in conjunction with Mr. Hamilton, decided wireless offered the solution which best suited the Council's requirement in terms of a reasonable capital cost, low operational costs and the ability to operate from 40Mbps to 300Mbps.

The Civic Hall was some 7 km from Broxbourne's HQ, with a hill in between, and Case Communications undertook a test between the sites, using a listed clock tower at Council HQ and the Civic Hall roof. A data rate of 15Mbps was achieved, but this was during the winter months when the trees had no leaves. The Case Communications engineers felt that when the summer came and the leaves appeared on the trees this would reduce the data rate and possibly affect reliability to below an acceptable level. Therefore this link was implemented using not wireless but fibre.

The golf club was an easier link on which to guarantee a service level and a 40Mbps WiMax system was tested, yielding a full 40Mbps. The Council's planning committee had reservations about allowing any external objects to be attached to the clock tower. It would be possible to camouflage the antennae but we would need to wait for the planning committee to meet to grant or deny permission for an external antennae to be mounted on the tower.



Broxbourne Clock Tower

In the meantime Case Communications undertook a test with the antennae located inside the clock tower and achieved a full 40Mbps using a 40Mbps system.

Case Communications were then given permission to install the system inside the clock tower.

In order to make it easier to install additional WiMax systems in the future, the Case Communications engineers installed a Case Communications rugged switch and fibre cable from the top of the clock tower to the Council's computer room. This link runs at 1.25Gbps and provides a concentration point for future wireless systems to other locations.

The wireless systems and Case Communications' switches are managed via SNMP allowing any alarms, events or activities to be sent to an SNMP management system such as the CaseView Manager.

The golf club is now an integral part of Broxbourne Council's IT system and the club members have 40Mbps Internet access which can be upgraded to 300Mbps by use of software keys should more bandwidth be required in the future.