



Ore Valley Housing Association has developed a state-of-the-art business centre in Lochgelly, aimed at providing start-up businesses in Fife with the ideal home from which to grow. The building itself utilises cutting-edge design and is highly energy efficient, maximising solar gain and innovative environmental management technology to keep the building's energy requirements to a minimum but also maintaining high comfort levels for users throughout the year. The centre utilises the Termodoc heat recovery system to recycle heat generated by the building's users to help reduce heating costs.

When the state-of-the-art building was completed the developers handed over a business centre fit for purpose with 21 offices, 3 meeting rooms and 3 conference rooms. The building had been flood wired at the construction stage with a Cat5e cabling system and all business units were presented with network outlets and an Internet connection, however there was no facility provided for Wireless Connectivity. In the first stages of the building becoming occupied, Fife HARCA were happy to allow the tenants to provide their own Wi-Fi routers for wireless access within each business unit. This approach was acceptable until the office units began to be populated – however some issues began to surface, such as lack of overall management and control of Wi-Fi signal and coverage (leading to interference and complaints) and of course limited scope for moving around the building or accessing private data whilst holding or attending meetings in the conference / meeting room facilities, due to the distances involved.

Fife HARCA decided that a centrally managed and controlled Wi-Fi system would be better suited to the changing needs of the buildings users; a system that would allow each business unit to have their own secure, fast and reliable Wi-Fi network that extended from their location within the business centre to all conference rooms and meeting rooms to allow the tenants access to their own network and the Internet no matter their location within the building.

Using our expertise in Wireless LAN technologies and signal propagation, we set about mapping the business centre using desktop planning software to predict the coverage and required number of Access Points, based on discussions with the customer relating to their desired coverage and performance demands. A live site survey was then conducted, which reported the aforementioned coverage and performance expected and having then obtained the customers approval, our unique guarantee would then be honoured should the solution not perform as agreed.

Coverage was to be throughout the building for all 21 business units. Each unit was to have their own secure Wi-Fi LAN that would allow access to their own networks (Printers, servers etc.) while also allowing access to the shared Internet resources provided by Fife HARCA.

Rapier Systems designed and installed a state of the art Wi-Fi system manufactured by Ruckus Wireless, utilising the ZoneFlex 7372 access points - as this system would provide the security for each business unit while also allowing for the required density of SSIDs, but keeping the amount of installed Access Points to a minimum. This could be achieved due to the patented antenna array used by Ruckus - giving up to 2.5 times the coverage of a traditional Access Point with additional features such as PD-MRC to give the best signal strength and throughput for tablet devices, no matter the orientation of the device. The entire business centre (3 floors, 21 units, 3 conference rooms & 3 meeting rooms) has been covered with ONLY 3 Access Points - allowing Fife HARCA to offer tenants a secure, fast & reliable Wi-Fi network. and has reduced the power consumption of the building and released the RF spectrum for surrounding businesses and homes.



**“Providing Wi-Fi to all tenant businesses and guests in as pain-free a manner as possible was undoubtedly made easier through the skill and understanding shown by Rapier Systems”**

Vicky Murdoch, Business Development Assistant - Fife HARCA.

## About Rapier Systems

Formed in 2003 Rapier has unrivalled expertise in the design, delivery and support of wireless (including WiFi) networks and systems; the company is a value added integrator of best-in-class wireless products.

Whether within or between buildings, upgrading or replacing existing networks, or designing and installing new wireless systems, Rapier's experience in environmental analysis and network design ensures complete coverage and optimal performance.

Rapier works with world leading wireless system vendors, including Ruckus, Alvarion, Airtight, Cambium/Motorola, Ceragon, SAF Technika and several more. The company has reached the highest level of accreditation with each of its partners and understands which vendor and product is best suited for each environment.

Rapier has grown dramatically on the back of a surge in demand for wireless networks, which it has designed and installed in a wide variety of challenging environments from colleges and oil rigs to business parks and theatres.

Rapier maintains Scotland's largest Wireless Network, covering Dundee City, Angus and Perth & Kinross Councils, which comprises around 250 sites.

The company has designed and delivered some of the most innovative wireless solutions in the UK, including the largest metropolitan area wireless network in Scotland and one of the largest county-wide wireless networks in England. Rapier delivered the 1st fully licensed Gigabit wireless link in the UK.

The company's headquarters is located in Fife, Scotland and it has offices in St Neots, Cambridgeshire, England.

Rapier has a UK wide customer base in sectors that include Local Government; Transport, Renewables, Oil and Gas, Retail and Leisure.

For further information please visit [www.rapiersystems.com](http://www.rapiersystems.com)

