

Response from Midland Expressway Ltd (M6toll)

Thank you for inviting views from stakeholder's on Ofcom's statement for increasing the amount of 5 GHz radio spectrum available for Wi-Fi (WLAN) and other related wireless technologies. Allowing WLAN to expand into the 5.8Ghz region would give us major concerns as we use the 5795-5805 MHz for Dedicated Short-Range Communications (DSRC) system, commonly referred to as 'tag and beacon'.

The frequency is used to communicate between road side equipment (RSE) and vehicle on board units (OBUs) in order to detect vehicles and trigger the opening of an on road barrier.

We have 45,000 OBUs in circulation, and the installation of the RSE within our tolling plazas was a major undertaking. We process over 2.2 million transactions per year using this technology. Other bridge tolling organisations such as Dartford River Crossing, Severn River Crossing and Tamar Crossing also use the same technology. Furthermore, the use of DSRC technology was in compliance with ERC/REC 70-03 for road tolling applications.

Tag (OBU) equipped vehicles expect to be detected by the roadside equipment and as a result the barrier opens whilst they pass through our tolling lanes at speeds up to 25kph. Such tolling lanes can process over 1000 vehicles per hour, which is required to ensure that we do not have vehicle queuing within our toll plazas. Any complications which interfere with the communication between OBU and RSE result in the tolling transaction not taking place and the barrier not opening. Such events even if they happen infrequently are a major operational concern, cause significant inconvenience to customers and are Health & Safety risk as vehicles having to stop (unexpectedly) adds to the risk of vehicle accidents.

Our equipment providers have confirmed that allowing the WLAN frequencies to coexist with our own DSRC system, at the proposed output levels, would cause interference problems, resulting in tag and beacon communication not being completed within the acceptable timeframe in order to effect the correct operation of our tolling system.

We agree with the view of ASECAP, that the problem can be addressed by avoiding the 5795-5815 MHz frequency bands and using the output power foreseen under the short-range device decision of 25 mW in the 5725-5875 MHz frequency bands