



## Smart Streetworks Project Streamlines 5G Expansion

Smart city innovators demonstrated how operators can effectively densify their networks while empowering municipalities to offer improved services for residents, visitors and businesses in Dublin. The Connected City Infrastructure project worked with Alpha Wireless and Bigbelly to help clean up 5G deployments with a telecoms-enabled waste and recycling enclosure and integrated Tri-Sector antennas.



## The customer

Working in concert with the Telecom Infra Project (TIP) Connected City Infrastructure group, the Dublin City Council collaborated with an ecosystem of local network operators, equipment suppliers and academia to solve the challenge of enabling essential connectivity without unsightly clutter.

## The country

Ireland

## The products



### AW3872

Ultra-compact, tri-sector canister antenna



### Telebelly 500

with integrated antenna mast

***“This project is an excellent example of collaboration to address the challenge of deploying telecom solutions in a busy urban centre. Dublin City Council was delighted to work with TIP, Bigbelly and Alpha Wireless to bring this partnership together.”***

**Jamie Cudden**

Smart City Program Manager  
at Dublin City Council

## The challenge

As 5G roll-outs escalate worldwide, network operators require new ways to densify site deployments for faster, simpler scaling. With traditional macrocell sites becoming more difficult, operators and neutral hosts are increasing reliance on street-level small cells. However, an ad-hoc approach to small cells can lead to repeated disruptive civil works, excessive clutter and unsightly equipment tacked on to existing streetworks.

In order to avoid potential deployment pitfalls, the Dublin City Council worked with the TIP Connected City Infrastructure group and their local telecom ecosystem to investigate more functional and aesthetically pleasing solutions to hide network infrastructure in plain sight. And while a key goal of the project was to resolve network congestion, the City Council also was keen to improve services as part of a Smart Dublin initiative without impacting other infrastructure or the power grid.

## The solution

Cellnex Telecom deployed the new small cell sites in Dublin’s urban center, incorporating radio access network (RAN) equipment with integrated tri-sector canister antennas from Alpha Wireless. The shared sites are concealed in the Bigbelly Telebelly, a smart waste and recycling platform designed to host radios, power and transmission equipment discreetly within a sensor-equipped enclosure that also communicates real-time status to waste collection crews for optimized efficiency.

Selection of the smart waste platform allowed network equipment to be discreetly deployed in public spaces while delivering improved community services. Moreover, the integrated, multiband antenna solution from Alpha Wireless enabled the sites to be designed with a smaller footprint and improved aesthetics. This not only minimized street-level clutter, but also complied with Article 57 of the European Electronic Communications Code (EECC) pertaining to small cell deployments.

## The results

Based on the success of this TIP Connected City Infrastructure project, the Dublin City Council has begun planning new small cell site deployments in the urban core for shopping and sightseeing. Of particular interest is an expansion in the Dublin Docklands area to integrate the 5G network with existing augmented reality (AR) services for tourists.

The Dublin City Council expects the small cell deployments to evolve and grow. In fact, the local telecom industry is now conducting bi-annual meetings with the Connect Research Centre at Trinity College to continue discussions about how this shared, neutral host approach can be replicated throughout Ireland, facilitating the work of city planners and network operators alike in even the most dense urban environments.

## Why Alpha Wireless

Alpha Wireless’ integrated tri-sector canister antenna solution was selected based on proven performance, delivering the capability needed to support in-fill capacity and the discrete aesthetic required for concealment. As a market leader in telecom streetworks antenna solutions, Alpha Wireless brought a proven track record and peace of mind to the project.

With more than 1.5 million antennas installed worldwide, Alpha Wireless works closely with network operators, system integrators, neutral hosts, utilities and municipalities to collaborate and innovate as we solve even the most complex antenna-related network issues. We bring decades of experience in the design and manufacture of quality solutions, enabling a smooth evolution from 4G/LTE networks to 5G with a full range of innovative antennas. Contact Alpha Wireless today to learn how we can help you maximize coverage, capacity and cost-efficiency.