Connectivity beside the seaside

Philip Mason talks to stakeholders involved in the roll-out of a Blackpool-wide private 5G network, intended to, among other things, provide guaranteed connectivity to the town's beach-side public safety services

Situated in Lancashire on the north-west coast, Blackpool is one of the busiest and most vibrant seaside towns in the whole of the UK.

This is borne out by statistics released by the city council in 2023, illustrating its popularity as a resort post-COVID. The number of annual visitors, said a statement, "surged past" 20 million in 2022, thereby illuminating its continuing status as a key tourism centre for the region.

As anyone who has ever visited will know, the town offers a range of attractions, not least the 520-ft tall feat of Victorian engineering that is Blackpool Tower, as well as a 42-acre amusement park.

Alongside the Pleasure Beach, however, there is also a seven-mile actual beach, attracting swimmers, walkers, surfers and so on.

While Blackpool's popularity is clearly a massive positive when it comes to the local economy, the influx of extra people every spring and summer also creates obvious challenges when it comes to public safety.

To reference a less positive set of statistics than those above, for instance, the town has a relatively high crime rate, according to numbers released by the Home Office in 2024. Returning to the tourist and leisure piece, meanwhile, it is also clearly imperative to keep the aforementioned swimmers safe.

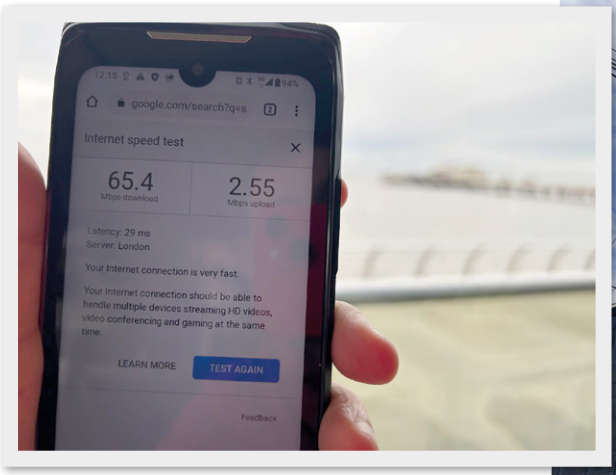
Fibre backhaul

Blackpool Council is in the process of rolling out an 18-cell private 5G SA network with fibre backhaul across the town. This was part of a two-year project, part-funded by the Department for Science, Innovation and Technology (DSIT) through the OpenRAN REACH initiative, which completed in March 2025.

The small cells being used in the project are provided by a company called cellXica, with the network and the open-source core being furnished by Wavemobile.

While the public safety use-case is by no means the only one that the council has in mind, it is very much a focus of the project. One key location in relation to this is the beach.

Discussing the origin of the project and its progression, Blackpool Council's head of IT services, Tony Doyle, says: "We were funded by DSIT predecessor DCMS a number of years ago to build our own fibre network in the town. We put fibre in the tramway out to two



"You can already see multiple opportunities for leveraging Blackpool as a testbed"

enterprise zones and also to the city centre.

"The fibre is managed by a co-operative-type model where we take what we need and then share with private enterprise in the town."

He continues: "We're very interested in how we leverage that infrastructure to help the regeneration of Blackpool. And, obviously, we want to add value onto that infrastructure, for instance, with the new 5G network.

"You can already see multiple opportunities emerging, for instance, leveraging Blackpool as a testbed in a way that you possibly couldn't do elsewhere. Particularly because we've got that ultra-low-latency fibre network, which we use as backhaul for the 5G infrastructure".

Moving onto the public safety element, use-case applications are being provided by a company called SafeNetics. (Which longtime readers of the Journal may remember from its previous work with Swaledale Mountain Rescue, as reported in 2022).

Discussing this, the company's UK research and development executive, Graham Worsley, says it was exploring the use of "standardised mission-critical applications, including push-to-talk and push-to-video".

He continues: "We used Crosscall Z5 ruggedised mission-critical phones, and RSMs using specialist testing SIMs. We observed that commercial phones couldn't access the N77 frequency Wavemobile set the network up on."

At the same time, drones are also a major part of the conversation, particularly relating to increased situational awareness on the beach. This is being explored following contact with drone technology specialist Project Noctua.

To quote Doyle again: "There are a variety of drone use-cases when it comes to the emergency services. That includes providing a presence at the scene of an incident much more quickly. I think that we've also been talking about delivering urgent medication and – for example – defibrillators.

"There's a definite opportunity to get to a point where you can fly a drone out to a search-and-rescue-type situation a lot quicker than you could mobilise a helicopter. I can almost see a world where retired firefighters and paramedics could suddenly be delivering 'virtual' emergency services by drone."

Regarding the situational awareness piece, Doyle mentions plans in relation to what he calls an "eye-in-the-sky-type situation", with footage transmitted back to an operator/control centre.

"There are opportunities around that," he says, "as well as to gather intelligence more quickly. Blackpool is a place where there are a lot of events going on, as well as potentially high-profile visitors at different times."

(The latter is a reference to the return of party conferences to Blackpool, for instance in 2022, when the Conservatives pitched up at the Winter Gardens conference centre).

Broadly speaking, there are two methods by which drones can be operated. The first is via a human being observing and controlling the unit directly, which is the current operational standard for UK emergency services. The second is what is known as 'beyond visual line of sight' (BVLOS).

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