

# Bromley 4G/5G Small Cell Mobile Infrastructure Deployment

BEP Update  
19<sup>th</sup> July 2022



## Economic Development Strategy to 2031 launched

Bromley open for business

Enabling our residents  
and businesses to prosper



THE LONDON BOROUGH  
[www.bromley.gov.uk](http://www.bromley.gov.uk)

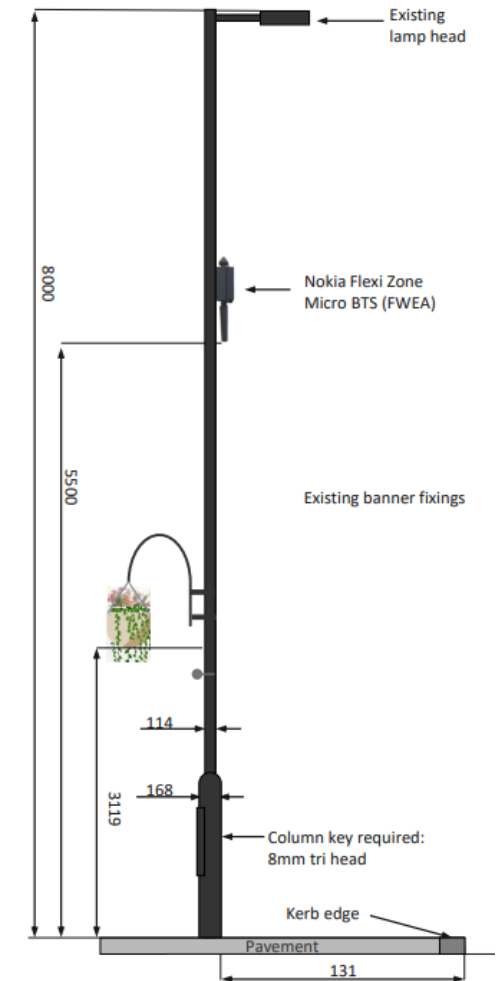
# Background

- *The Ofcom Connected Nations report in Spring 2022*
  - **The geographic coverage of 4G mobile network services by at least one mobile network operator (MNO) is over 92% nationally** (expected to rise to 95% by end of 2026).
  - Bromley has **95%** geographic coverage of 4G mobile network services available **from the four MNOs** (EE, Vodafone, Three and O2).
  - The coverage in Bromley is slightly below neighbouring boroughs. This ranges from 97% in Merton to 100% in Southwark. However Bromley is a **much larger borough and nearly all premises** are included within the area of coverage.
- Bromley was **one of the first local authorities** to develop its **Digital Infrastructure Toolkit** and an **Open Access agreement for infrastructure providers to access our Highways assets and improve 4G/5G mobile connectivity**, based on the DCMS model.



# Background

- Bromley signed an Open Access agreement in June last year with **Freshwave** to allow access to our **street furniture/lamp columns** to deploy **4G/5G Small Cell Mobile equipment** and improve **coverage and connectivity in Bromley for MNOs like O2**.
- The 4G/5G mobile small cell deployment is **totally commercially driven and depends on the demand expressed by the MNOs to mobile infrastructure providers like Freshwave**.
- 4G/5G small cells were initially deployed by Freshwave at **14 high street locations in 3 local town centres (Bromley, Penge and Orpington)** during the first year.
- This has improved the connected experience of **O2** mobile users around these commercial areas.
- This has also **improved the full-fibre footprint** across these areas as every small cell is fibre connected.





# 4G/5G Small Cell Mobile Infrastructure Locations with increased Signal Strength & Coverage

Penge High Street (x 4)



Bromley High Street (x 6)



Orpington High Street (x 4)



Key	
	Selected small cell location
	Borough boundary

Signal Strength Key

RSRP (dBm)	
	[Min, -121]
Poor Coverage	[ -121, -118]
	[ -118, -116]
	[ -116, -113]
Average Coverage	[ -113, -110]
	[ -110, -105]
	[ -105, -95]
Good Coverage	[ -95, -80]
	[ -80, -65]
	[ -65, Max]

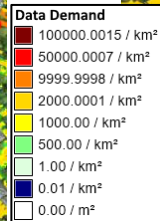
**\*Note:** dBm stands for decibel milliwatts and can be used in radio, microwave, and fibre-optical networks as a measure of absolute power. The closer the number is to 0, the better off your signal strength.



# Data Demand vs Improved Connectivity at Key Town Centre Locations

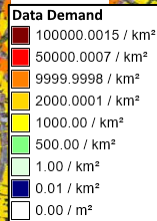
- Data demand is concentrated on the high street (as shown by the dark brown and red areas) and the 4G/5G small cells have also been deployed at these locations within the purple boundary lines improving connectivity locally

Penge High Street



Data Demand

Bromley High Street



Data Demand

Orpington High Street



Data Demand



Improved Connectivity



Improved Connectivity



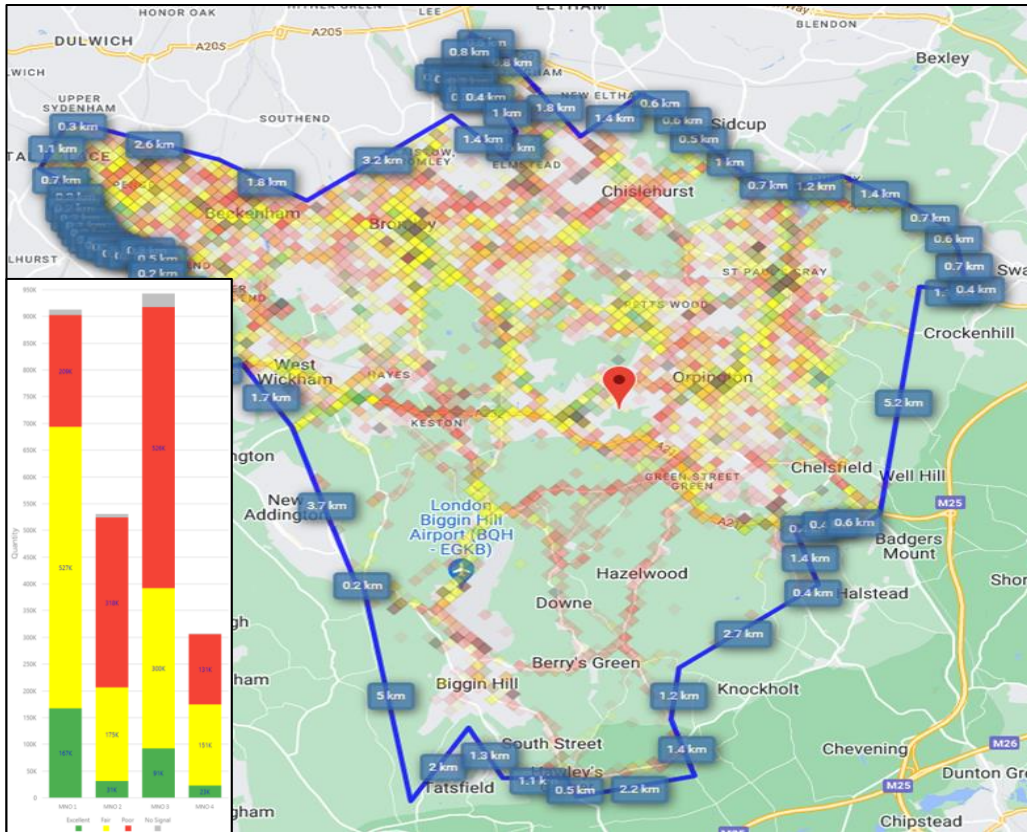
Improved Connectivity



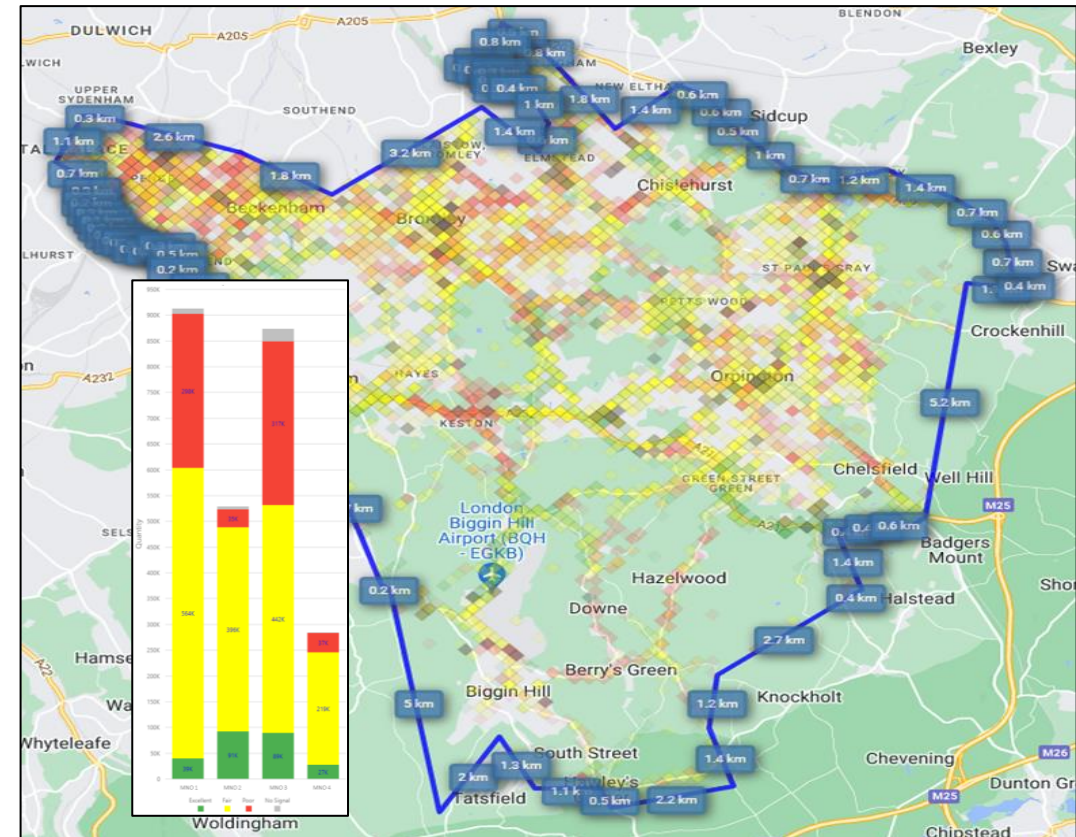
# Bromley Coverage and Capacity

- Bromley has mostly fair to excellent 4G mobile network **capacity/quality** (shown by yellow and green areas) for each of the 4 MNOs.
- However, 4G mobile network **coverage** for some MNOs is not sufficient; particularly in some identified areas like Orpington (shown by red areas), preventing mobile users from accessing their services.
- Thus, **additional infrastructure** is required to improve the experience of local residents.

### Coverage



### Capacity



## Latest News Update

- Freshwave is presently awaiting approval from LBB Highways Team to deploy **12** additional 4G/5G small cell mobile equipment during the current year, which will include **new locations in Beckenham Town Centre**
- Freshwave also plans to engage an additional mobile network operator by 2023
- The Council has successfully negotiated a second Open Access agreement with **Cellnex** to deploy additional 4G/5G small cell mobile infrastructure to improve coverage across the borough
- A third Open Access agreement is currently being finalised with **BT/EE** who are initially proposing to deploy **7** additional 4G/5G small cells mobile infrastructure during the current year.

