

Decision Maker: **RENEWAL, RECREATION AND HOUSING POLICY
DEVELOPMENT AND SCRUTINY COMMITTEE**

Date: **Monday 12 September 2022**

Decision Type: Non-Urgent Non-Executive Non-Key

Title: **DIGITAL INFRASTRUCTURE WORK PLAN UPDATE**

Contact Officer: Ose Akpom, Economic Development Manager
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Chief Officer: Sara Bowrey, Director of Housing, Planning, Property and Regeneration

Ward: All Wards

1. Reason for decision/report and options

- 1.1 The Digital Infrastructure Work Plan was adopted by the Council in February 2021 (Report No. DRR20/017). This report provides an update on progress of digital connectivity within the borough.
- 1.2 An information update on the Digital Infrastructure Work Plan will be provided to RR&H PDS quarterly.

2. **RECOMMENDATION(S)**

- 2.1 **The Renewal, Recreation and Housing PDS Committee is requested to note the delivery of the Digital Infrastructure Work Plan within the borough.**

Impact on Vulnerable Adults and Children

1. Summary of Impact: Improved digital infrastructure will create opportunities with regards to work and education.

Transformation Policy

1. Policy Status: Existing Policy
2. Making Bromley Even Better Priority:
 - (1) For children and young People to grow up, thrive and have the best life chances in families who flourish and are happy to call Bromley home.
 - (2) For adults and older people to enjoy fulfilled and successful lives in Bromley, ageing well, retaining independence and making choices.
 - (3) For people to make their homes in Bromley and for business, enterprise and the third sector to prosper.
 - (4) For residents to live responsibly and prosper in a safe, clean and green environment great for today and a sustainable future.
 - (5) To manage our resources well, providing value for money, and efficient and effective services for Bromley's residents.

Financial

1. Cost of proposal: No Cost
2. Ongoing costs: Not Applicable
3. Budget head/performance centre: Culture and Regeneration – Economic Development
4. Total current budget for this head: £127k
5. Source of funding: Existing Revenue budget. Future investment will be sourced from grant funding

Personnel

1. Number of staff (current and additional): 1
2. If from existing staff resources, number of staff hours: 14 staff hours p/w

Legal

1. Legal Requirement: None
2. Call-in: Not Applicable: No Executive Decision

Procurement

1. Summary of Procurement Implications: There are no implications for Procurement associated with any of the work streams discussed in this report.

Property

1. Summary of Property Implications: There are no implications for Property associated with any of the work streams discussed in this report

Carbon Reduction and Social Value

1. Summary of Carbon Reduction/Sustainability Implications: There are no implications for Carbon Reduction/Sustainability associated with any of the work streams discussed in this report.

Customer Impact

1. Estimated number of users or customers (current and projected): All persons in Bromley who use internet or mobile products and services including in the workplace and at home.
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Ward Councillor Views

1. Have Ward Councillors been asked for comments? N/A
2. Summary of Ward Councillors comments: N/A – This is an information only update on the approved Digital Infrastructure Work Plan.

3. COMMENTARY

Background

- 3.1 In February 2021, members of the Executive approved the Digital Infrastructure Work Plan (DIWP), which sets out a way to move forwards and improve Digital Connectivity within the borough.
- 3.2 Digital connectivity is critical for the ongoing social and economic prosperity of Bromley. As outlined in the DIWP, interventions can be explored to support the roll out of gigabit capable connectivity (internet speeds of over 1 gigabit per second), notably through facilitating the development of:
 - Full-fibre to the premises broadband (FTTP)
 - 4G and 5G mobile networks

Memorandum of Understanding (MoU) with Openreach and Full-Fibre Broadband (FTTP)

- 3.3 The Memorandum of Understanding sets out the commitments made by both the Council and Openreach with the intended purpose of speeding up the delivery of the Openreach full-fibre broadband (FTTP) deployment plans. It demonstrates the Council's commitment to supporting the Openreach roll out of full-fibre broadband in the borough. Openreach anticipated to connect **85%** of Bromley by 2023.
- 3.4 The Fibre First Roll Out is a commercially driven roll out led by Openreach, who are upgrading telephone exchanges within the borough to ultrafast full-fibre broadband connections. The Council does not have any influence over which telephone exchanges Openreach announce, or the build programme and cannot determine the investment. However, since Openreach already has a significant amount of ducting, including overhead cable/pole networks within the borough; much of the work will be focussed on rewiring, replacing copper wiring with fibre-optic cabling, meaning that digging and associated disruption will be kept to a minimum.
- 3.5 Much of the data relating to the build is commercially sensitive and not available publicly. The build programme is updated quarterly on the Openreach website and is available to view publicly.
- 3.6 The data from May 2020 (prior to the Openreach rollout) showed just **1%** of premises within Bromley had full-fibre broadband access available, compared with the average of around **13%** across several Outer London Boroughs and **17%** across London in general.

The latest figures show that full-fibre broadband coverage across Bromley has increased since the last update report in January 2022 from 25% to over **37%** in August 2022. Bromley remains below the average of **44%** for full-fibre broadband coverage generally available across London,

although significant progress has been made to narrow the gap. The increased coverage is primarily due to the current Openreach build programme in the borough, with **17%** more coverage by Openreach than their average across London.

Gigabit capability in general, is higher than the London average with over **92%** coverage of the borough, compared to 82% across London (over 88% of the coverage in Bromley is due to Virgin Media/O2 cable coverage which is amongst the top rates of coverage for boroughs across London).

3.7 Openreach would ideally prefer to cover 100% of an exchange area, if it was not for the various cost factors involved. The approach is to primarily target the simpler overhead cable network, before re-visiting areas to address incremental extras, such as properties with cable networks running underground.

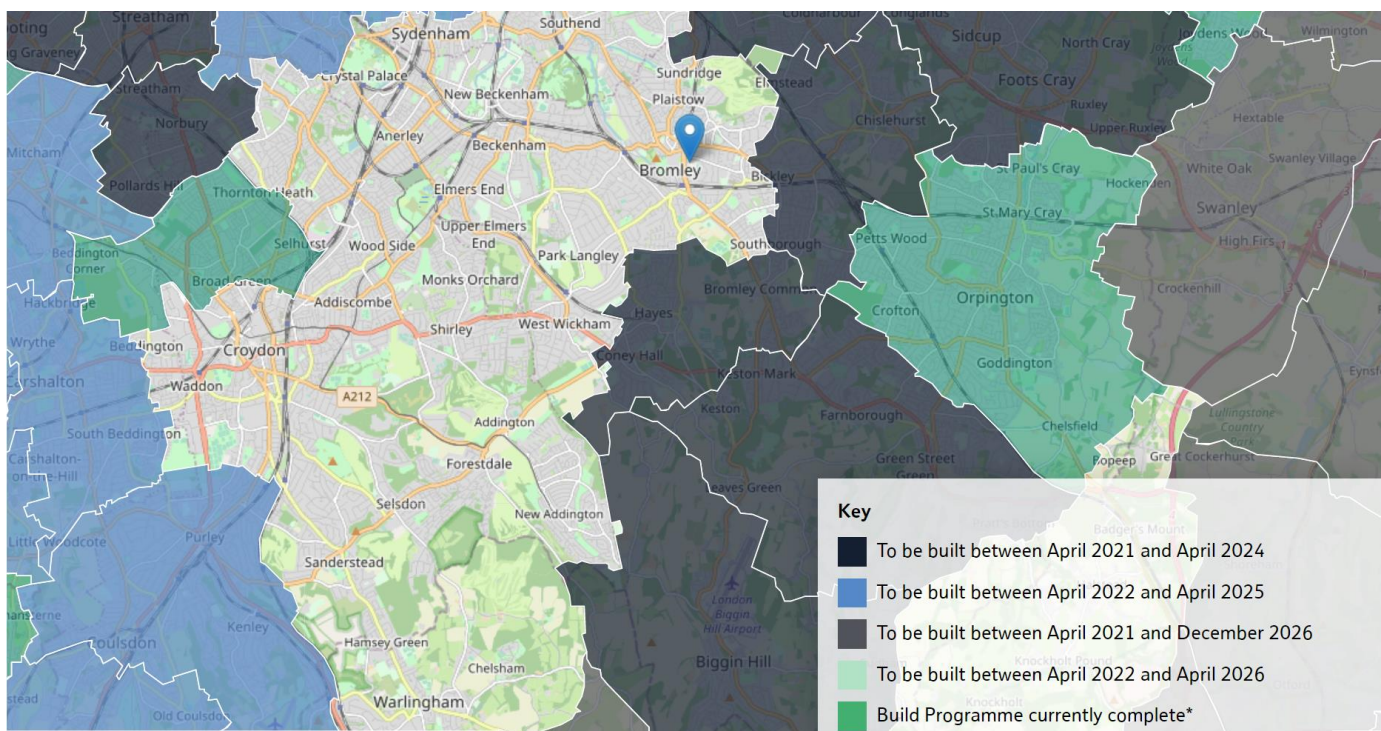
The progress towards meeting their standard premises completion target of **75%**, which is required for the upgrade of the 5 telephone exchanges announced by Openreach (selected from the 9 telephone exchanges within Bromley) is shown below, along with the build delivery phase timescales:

- Farnborough Build Delivery Phase 2021/22-2023/24 (in progress - 60%)
- Orpington Build Delivery Phase 2021/22-2023/24 (**completed - 79%**)
- Biggin Hill Build Delivery Phase 2021/22-2023/24 (in progress - 70%)
- Chislehurst Build Delivery Phase 2021/22-2023/24 (in progress - 71%)
- Hayes Common Build Delivery Phase 2021/22-2023/24 (in progress - 39%)

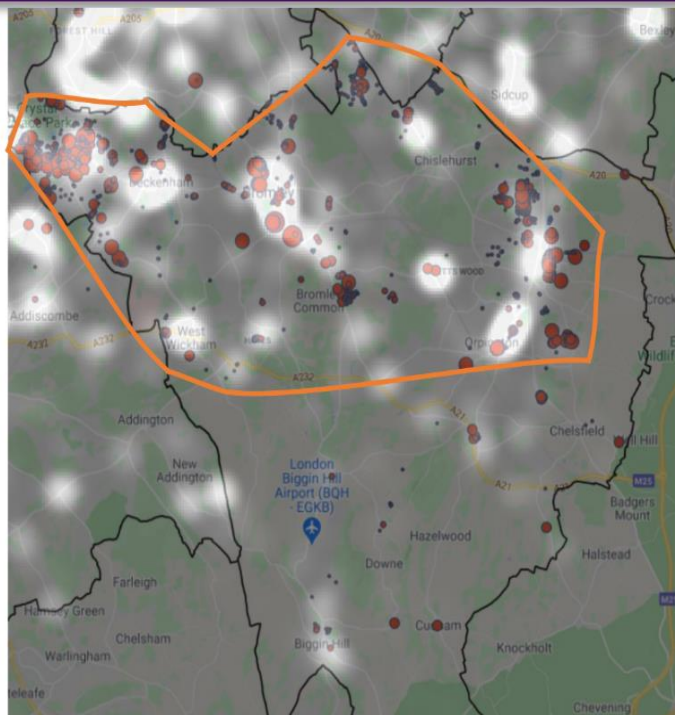
3.8 The progress made with the neighbouring telephone exchanges with boundaries that do not line up directly with the boundaries of the borough, but cover of areas within the borough is shown below:

- Grove Park (Lewisham): Build delivery phase 21/22 – 22/23 (in progress – 68%)
- Sidcup (Bexley): Build delivery phase 21/22 – 22/23 (in progress – 39%)

3.9 The areas covered by this upgrade can be viewed in the map below with a key showing the Openreach build programme dates:



3.10 The remaining four Bromley telephone exchanges which have not been announced for upgrades in the current build programme are Bromley Central, Beckenham, Sydenham and West Wickham. These areas are closely aligned with concentrations of multiple dwelling units/MDUs in social housing (primarily Clarion Housing owned units), along with businesses in town centres, as shown on the map below:



Key:

- Bromley Council & Clarion Owned Social Homes
- Business Concentration areas
- A potential Build Area

* Source: ONS - UK Business: Activity, Size and Location 2021. Numbers include micro enterprises (<9 employees), small enterprises (10 to 49 employees), medium-sized enterprises (50 to 249 employees) and large enterprises (>250 employees).

** Source: Business locations come from current Land Registry data.

According to Land Registry data Clarion own 8,155 units in the borough. Around half of Clarion's units are in the north of the borough.

The largest three housing associations in the borough after Clarion are Optivo, A2Dominion and Hyde Housing (although they all have small holdings)

Social Housing/Multiple Dwelling Units (MDUs)

3.11 Discussions have taken place between the Council and Clarion Housing, including other full-fibre infrastructure providers (e.g Openreach, Community Fibre, Hyperoptic and Virgin Media), with a view to improving full-fibre broadband connectivity across social housing in Bromley. This is particularly significant, given the commercial attractiveness of MDUs, which provide the necessary critical mass to enable the extension of existing infrastructure networks generally; as well as potential benefits for the residential and commercial areas with identified gaps in full-fibre coverage.

3.12 Clarion Housing has existing master wayleave agreements with most infrastructure providers at a regional level, which help to facilitate easier access to install full-fibre broadband across their social housing. Community Fibre and Openreach are particularly keen to support delivery in Bromley to extend their existing full-fibre broadband network coverage. Consequently, Openreach and Community Fibre are scheduled to deliver presentations to the Bromley Federation of Housing Associations during September. The aim is to promote a more localised

and focussed approach to the current process, which will accelerate the delivery of full-fibre broadband within the borough, via social housing. This will help to extend their current externally funded roll-out programme of full-fibre broadband at no additional cost to the Council.

Housing Sites

- 3.13 Openreach currently offer Ultrafast Full-Fibre Broadband to new residential sites through the provision of a FTTP network. Openreach generally build full-fibre connections to new sites of over 20 or more properties at no cost. However, this has been achieved on all new Council Build sites to date, given they are for 100% affordable housing.
- 3.14 Officers continue to seek further externally funded opportunities for the development of full-fibre within the borough as well as in areas not currently covered by current full-fibre development plans relating to the MoU.

Mobile Coverage – 4G/5G Small Cell Technology Infrastructure

- 3.15 The latest government targets for mobile include **95%** geographic coverage for 4G and that the majority of population would have access to a 5G signal by 2030.

The Ofcom Connected Nations report in Spring 2022 highlighted that:

- 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

- 3.16 To support the above ambitions, Bromley was one of the first local authorities to develop its own Bromley Digital Infrastructure Toolkit, which includes an Open Access agreement (in line with the Digital Infrastructure Toolkit published by DCMS). It currently sits on the London Tenders Portal and Market Operators interesting in deploying their infrastructure within the borough (such as 4G/5G Small Cells mobile equipment) can submit an Expression of Interest (EOI) to the Council. EOIs are reviewed on an individual basis to ensure that requirements are met and that the proposal is satisfactory.

- 3.17 Bromley signed an initial Open Access agreement in June last year with **Freshwave Ltd** to allow access to our street furniture/lamp columns to deploy 4G/5G Small Cell Mobile equipment to improve coverage and connectivity in Bromley for MNOs like O2. The arrangement is non-exclusive and allows multiple mobile network operators to develop infrastructure in Bromley.

The deployment is totally commercially driven and depends on the demand expressed by the MNOs to mobile infrastructure providers like Freshwave Ltd. 4G/5G small cells were initially deployed by Freshwave Ltd at **14** high street locations in 3 local town centres (Bromley, Penge and Orpington) during the first year, which has improved the connected experience of O2 mobile users and the full-fibre footprint around these commercial areas.

The Council received a total of **£7,300** for the 14 cells deployed during the initial year. This was comprised of £4,200 for a recurring annual income for those 14 sites plus a one-off expression of interest fee of £3,100 (i.e £1,700 project co-ordination fee plus £1,400 which is based on £100 per piece of apparatus/small cell proposed).

Freshwave Ltd is presently awaiting approval from LB Bromley Highways team to deploy **12** extra 4G/5G small cells at Beckenham town centre, along with other locations within the 3 town centres mentioned above. The Council expects an additional income of **£7,800** from Freshwave Ltd during this second year. This is comprised of £3,600 from Freshwave Ltd for the 12 cells anticipated to be deployed during the second year (which is a recurring annual income), in addition to £4,200 income, which is due for this second year for the 14 cells deployed in the initial year)

Freshwave Ltd also plans to engage an additional mobile network operator by 2023 (in addition to O2 Ltd, who is their current mobile network operator).

3.18 Each 4G/5G small cell deployed at a location will boost the signal and increase the radius covered by an additional 150m (e.g 6 x 4G/5G small cells in Bromley High Street provides additional 900m coverage) as displayed on the map below.

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

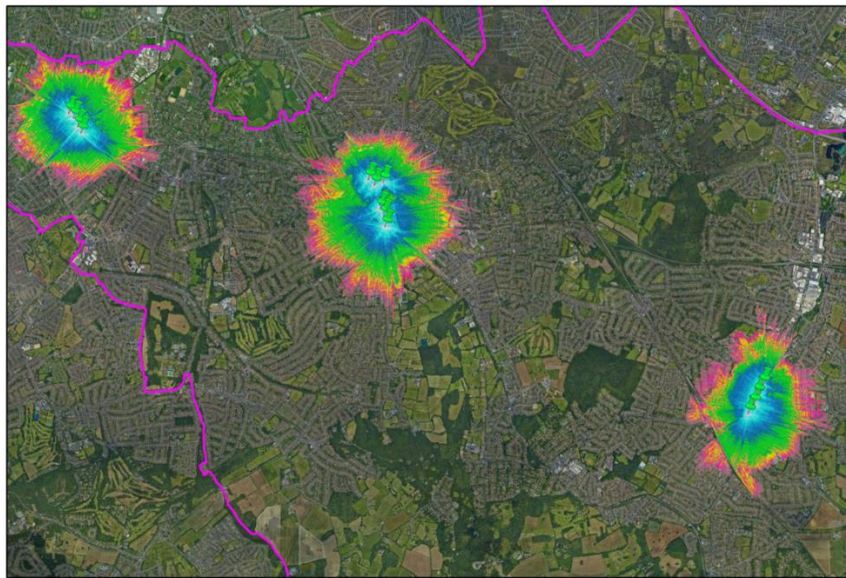
Penge High Street (x 4)



Bromley High Street (x 6)



Orpington High Street (x 4)



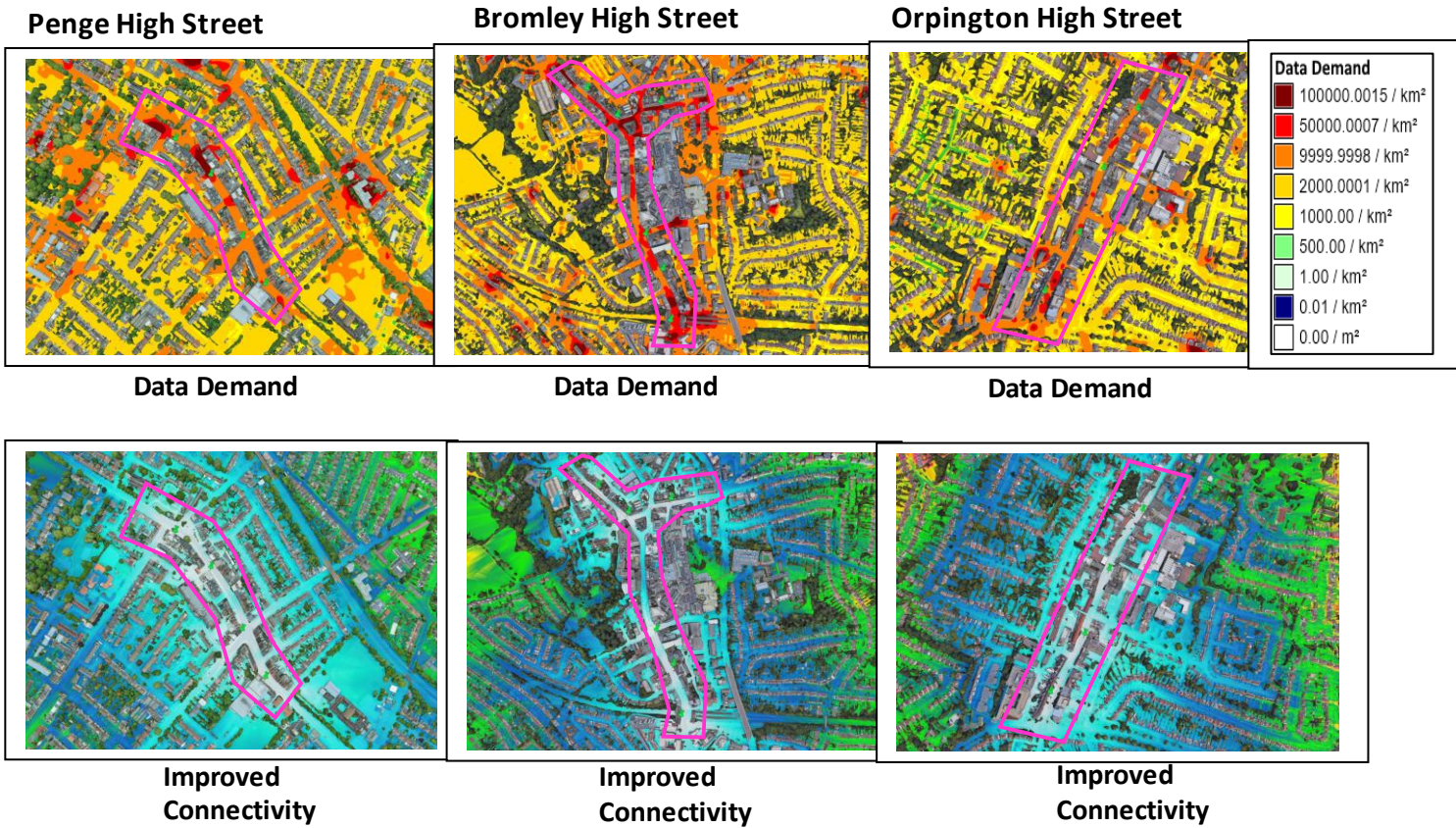
Key	
	Selected small cell location
	Borough boundary

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

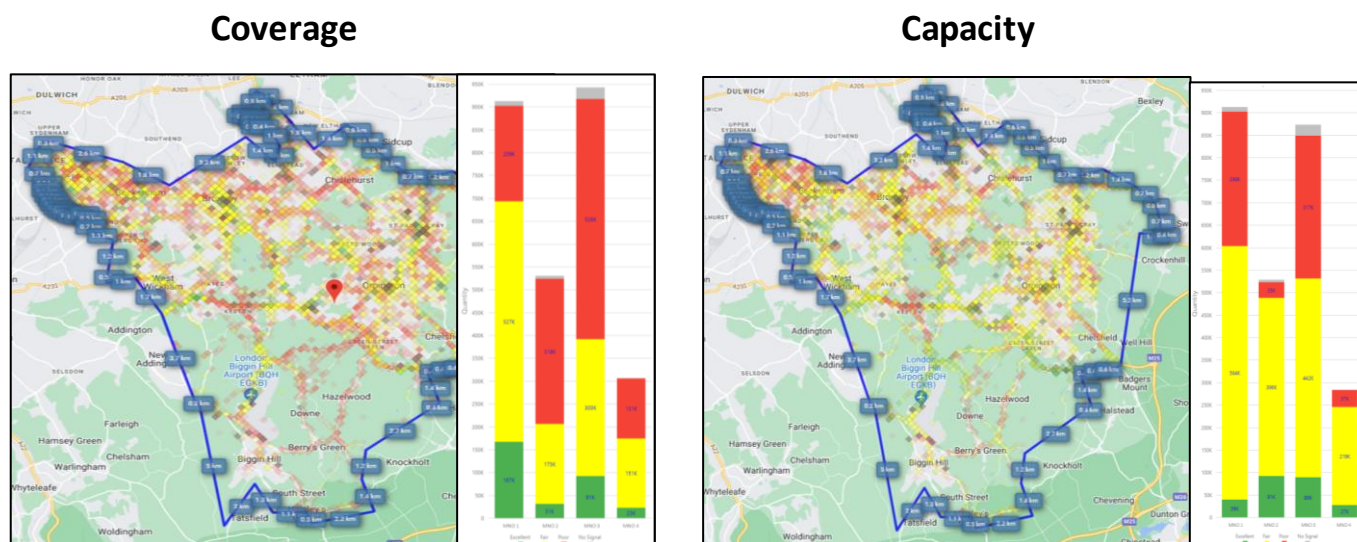
***Note:** dBm stands for decibel milliwatts and can be used in radio, microwave, and fibre-optical networks as a measure of absolute power. The closer the number is to 0, the better off your signal strength.

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

Data Demand vs Improved Connectivity at Key Town Centre Locations



3.20 The map below shows the experience of samples of mobile users at different locations across Bromley for each of the 4 mobile network operators in relation to 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

3.21 The Council successfully negotiated a second Open Access agreement with **Cellnex Ltd** earlier in the year. Their proposed asset list with number of mobile cells anticipated for the current year, including the income for the Council, will be confirmed by Cellnex Ltd in due course.

A third Open Access agreement has recently been finalised with **BT/EE Ltd**, who are initially proposing to deploy **7** additional 4G/5G small cells mobile equipment during the current year. The Council anticipates an overall income of **£4,500** for these 7 cells deployed during this initial year. This is comprised of £2,100 from a recurring annual income for the 7 sites, plus a one-off expression of interest fee of £2,400 (i.e £1,700 project co-ordination fee plus £700 which is based on £100 per piece of apparatus/small cell proposed).

Mobile Coverage – 4G/5G Masts & Towers Infrastructure

3.22 Three UK have 68 existing live sites within Bromley that are all due for upgrading with 5G and improved 4G, as part of their 2020-22 Acceleration Programme (some streetworks masts are shared with one other mobile network operator but not all). Existing 5G coverage in Bromley is 66%, but this is mainly in the North of the borough. Their existing sites cannot cover the demand, so additional sites are being added. The rooftop macro sites represent 90% of their existing sites and provide wider coverage. Three UK has identified around 37 new sites in Bromley for deployment to provide additional coverage. However, most of their planning applications for the required additional infrastructure in the borough were rejected mainly due to siting and appearance of the proposed masts. Their success rate of 17% in Bromley is lower than both the national average of 55% and the London average of 27%.

3.23 The Council provided initial advice to Three UK, following earlier meetings with relevant teams to explore ways that the Council can assist with improving the outcomes of future planning applications submitted by Three UK. Due to the number of individual applications the recommendations included practical suggestions for Three UK to group potential sites for higher

level advice on some key points at each site in a combined response. This is in order to provide a cost-effective pre-application service.

- 3.24 Discussions were also held earlier in the year between the Council and Cellnex UK in relation to their partnership programme with Network Rail; which is aimed at improving 4G/5G mobile connectivity for passengers on the London to Brighton Mainline railway (mainly in the Penge area), with additional benefits for local residents & businesses in surrounding areas. The proposed solution involves the use of towers or buildings with high-capacity fibre & specialist radio equipment; which provide uninterrupted cellular internet, mobile reception and fibre services along the length of the Brighton Mainline route (with improvements rolled out in 2022 - 23).
- 3.25 The Council provided support to Cellnex UK by facilitating engagement with local stakeholders such as the local Penge BID, alongside their other planned stakeholder consultation. Following the initial guidance received from LB Bromley Planning team, a number of pre-applications were submitted by Cellnex UK in March 2022 to provide the required infrastructure at 3 locations. Cellnex are currently addressing the report recommendations and advice provided by the LB Bromley Planning team in June 2022 with the aim of submitting the full planning applications.

4. IMPACT ON VULNERABLE ADULTS AND CHILDREN

- 4.1 Improving digital connectivity throughout the borough will increase the availability of online services to a wider audience, including those vulnerable adults and children.
- 4.2 Improving the reliability and speed of broadband connections, particularly in wards where there are indices of deprivation and to public services, will support better access to online services. This will be supported by ICT training for residents at the Council's libraries and resource shops

5. TRANSFORMATION/POLICY IMPLICATIONS

- 5.1 Making Bromley Even Better Priorities supported include: (i) For children and young People to grow up, thrive and have the best life chances in families who flourish and are happy to call Bromley home; (ii) For adults and older people to enjoy fulfilled and successful lives in Bromley, ageing well, retaining independence and making choices; (iii) For people to make their homes in Bromley and for business, enterprise and the third sector to prosper; (iv) For residents to live responsibly and prosper in a safe, clean and green environment great for today and a sustainable future; (v) To manage our resources well, providing value for money, and efficient and effective services for Bromley's residents

6. FINANCIAL IMPLICATIONS

- 6.1 The previously approved Digital Infrastructure Work Plan has no immediate financial implications for the Council as the actions set out in the Plan and the facilitation and development of digital infrastructure in the Borough will be progressed by existing staffing resources in the Culture and Regeneration Division, with support from other departments including Highways. In the event that additional resource requirements are subsequently identified, a further report would be presented to members.
- 6.2 Adoption of the Bromley Digital Infrastructure Toolkit for the roll out of 4G and 5G small cell technology has introduced the ability for the Council to charge a rental for use of its assets. This is a new income stream, but charges are regulated on a cost recovery basis and income levels initially are not expected to be significant.
- 6.3 The Council received a total income of **£7,300** for the 14 cells deployed by Freshwave Ltd during the initial year and anticipates a further income of **£7,800** during the current year, following the deployment of the 12 additional mobile cells to make a total of **26** mobile cells

overall. Additional income of **£4,500** is anticipated during the current year from BT/EE Ltd for the **7** mobile cells to be deployed. The income anticipated from Cellnex Ltd will be confirmed, once they have provided their asset list with the number of mobile cells to be deployed in the current year. This additional income stream will need to be reflected in future budget considerations.

7. LEGAL IMPLICATIONS

- 7.1 In the initial Part One Report no. DRR20/017 of the previously approved Digital Infrastructure Work Plan, Legal had analysed the Sutton toolkit and the Government Toolkit and in relation to the previous advice given from the Procurement Team and it was agreed that this is clearly not governed by the Procurement Rules.
- 7.2 Furthermore, the previous legal comments (stated in Report No. HPR2021/065) also reiterated that it was not described as a lease and business security of tenure did not therefore feature either. However, it seemed to be more of a contractual license of the land and an asset in consideration for a market value determined by valuation principles under the Code and best value together with compensation for disturbance of the asset and surveyors and legal expenses. Furthermore, the standard template agreement very much resembled a lease although it seemed to be more like an exclusive possession which was lacking as the asset was used by us and potentially other code operators. Sutton had effectively adopted the standard template and it seems to be that they also invited operators to propose terms based on that for Suttons further consideration with the expressions of Interest.
- 7.3 The Cellnex Legal Agreement (now finalised and signed by both parties) is also based on the same Digital Toolkit, (that the Freshwave Legal Agreement was also based on previously), with the same principles applied. Procurement also confirmed that there were no procurement implications relating to the Report and had previously advised that the use of the toolkit is an open-access property transaction and therefore not a procurement. It is not subject to the requirements of the Public Contract Regulations 2015 and that there is not an obligation to appoint the ‘most economically advantageous tenderer’ but to choose the solution that represents ‘best value’ for the local authority.
- 7.4 Similarly, for this Report, Procurement have confirmed that there are no specific procurement implications and that this Report does not need any review from Procurement or the Assistant Director of Governance & Contracts’s sign off to proceed.
- 7.5 Generally speaking and just to reiterate any code considerations are to be addressed by an expert such as a Surveyor/Engineer that the client department may have engaged with (i.e with respect to the Freshwave, BT or Cellnex providers in all of the Agreements). However, this is up to the client’s discretion. Everything has seemed to be clear in the Digital toolkit/guidance provided anyway.

8 CUSTOMER IMPACT

- 8.1 All persons in Bromley who use internet or mobile products and services including in the workplace and at home.

Non-Applicable Headings:	Procurement Implications; Personnel Implications; Property Implications; Carbon Reduction/Social Value; Ward Councillor Views
Background Documents: (Access via Contact Officer)	Digital Infrastructure Work Plan (Report No. DRR20/017) - Tuesday, 2nd February 2021