

Enhancing Digital Connectivity

The role of operators and local authorities



Access to ubiquitous, reliable, high-speed data at work, at home and on the move is critical for London's continued success as a global business hub. Some studies suggest that connectivity is now viewed by residents and business as even more important than good transport links¹.

Just as the Victorians built a future-proofed sewerage system, we must now do the same for our digital infrastructure in the twenty-first century. Meeting this challenge will require full fibre equivalent technologies, namely full fibre coverage (fibre to the premises) or 5G with full fibre backhaul. Most digital infrastructure will be delivered through private investment, and this requires an enabling regulatory environment coupled with digital-friendly local planning and street works policies. But we cannot be certain that the market will deliver the coverage that Londoners want, and there may need to be an intervention by the Government to achieve ubiquitous coverage.

Both the Mayor and London's boroughs share the ambition to see improved local digital connectivity, and a number of local authorities are supporting the delivery of local digital infrastructure. However, despite these efforts, there remain several barriers which are slowing down roll-out of digital infrastructure. London First wants to help to bridge the gap between ambition and delivery. We believe that local authorities, Londoners, business and operators share the ambition to deliver world-class digital infrastructure, but what is often missing is a dialogue between the parties to explain the challenges on all sides. This paper outlines what we see as the main challenges, highlights good practice and makes recommendations that we believe will help break down barriers and speed up roll-out of digital infrastructure in London.

¹ See, for example: Cluttons, The connectivity commercial impact report 2019, 2019

Deployment of full fibre in the UK is lagging behind competitors

The UK is lagging behind international counterparts when it comes to deploying full fibre. Official Government figures suggest the UK has 8.1% full fibre coverage, with around one-tenth of the London wired up to full fibre²; by contrast, cities in numerous developed economies in Asia have achieved nearly 100% coverage³.

While many countries focus on fibre to the premises, in the UK there are two types of fibre broadband: fibre to the premises (full fibre) and fibre to the cabinet (part fibre). For the latter, fibre runs from the exchange to the street-level cabinet, with copper cables finishing the last leg between the cabinet and homes. Full fibre to the premises is faster; fibre to the cabinet is cheaper and easier to roll out. If one takes into account both full fibre and part fibre, the UK has 95% coverage of superfast networks. The National Infrastructure Commission has set a target for the UK to be at full fibre to the premises (FTTP) coverage by 2033⁴, and the Prime Minister's ambition is to see full fibre broadband "sprouting from every household" by 2025. This means fibre finishing the last leg between the cabinet and homes. But even if he succeeds in achieving this, many other countries will have reached this point far earlier. Spain, for example, plans to reach full fibre in just a couple of years' time⁵.

Local barriers to digital infrastructure deployment

Delivering full fibre to premises is expected to cost £33 billion. Private investment is expected to deliver full fibre to 90% of UK premises, with the remaining 10% requiring further public funding⁶. Given the significant investment required of the private sector, it is vital there is an enabling regulatory environment coupled with digital-friendly local planning and street works policies. However, historically, operators have faced several challenges to the roll-out of digital infrastructure that cause delays or disincentivise investment:

- **Many of the costs and delays to digital roll-out arise out of a coordination challenge.**

The thirty-two boroughs and the City of London grant the planning permissions and prior approvals that relate to digital roll-out, but each can take a different approach to applying rules and permits. Even where boroughs have set digital connectivity as a strategic priority, this

² Ipspreview, Fixed Broadband Network Availability 2019 H1, 2019

³ PWC, Cities of Opportunity 7: London retains the top spot, 2018

⁴ National Infrastructure Commission, National Infrastructure Assessment, July 2018

⁵ Total Telecom, Spain targets 100% fibre coverage by 2021, March 2018

⁶ House of Commons Library, Full-fibre networks in the UK, June 2019

doesn't always filter down to the application of local planning and highway policies. For example, local policies aimed at decluttering public spaces are often at odds with the installation of new cabinets or mobile equipment such as masts and poles. Every borough sets its own street works and parking charges, and as a result the cost to operators varies considerably across London. Navigation between relevant departments – for example, those dealing with housing, planning and highways – can also be difficult and may require more direction and leadership within local authorities.

- **Access problems and complex ownership**

A wayleave is a contractual agreement between a landlord and a telecommunications provider that grants a network provider a right to access a property. Negotiating access to properties through wayleave agreements is often complex and slow for a variety of reasons. One such problem is that operators can struggle to identify the ultimate owner of the property. Some parts of London have especially complex ownership structures. BT Openreach claim that in the City of London alone, they have been unable to connect 7,500 tenants (76% or those in scope) to ultrafast broadband due to a failure to agree wayleaves with landlords⁷. In addition, there is no automatic right to access all new developments. Many new homes, especially in small developments, are still being built without full fibre connectivity. The Department for Digital, Culture, Media and Sport (DCMS) consulted on this in 2018, but there has been no response to the consultation to date.

How public authorities have responded

Central Government and the Greater London Authority

The Government has acted to try and reduce barriers to digital infrastructure deployment. In May 2017, DCMS established the Barrier Busting Task Force to work with local authorities on reducing the cost of street works, liberalising planning, simplifying wayleave agreements and tackling other barriers to roll-out⁸. As part of this, the digital connectivity portal was introduced late last year, providing guidance for local authorities and network providers on improving connectivity in local areas. It outlines useful information for local authorities in areas such as legislation, access to public sector assets and guidance on planning policies.

⁷ DCMS, Future Telecoms Infrastructure Review, July 2018

⁸ Matthew Hancock, Speech: Building a full fibre Britain, November 2017

The Government's reform of the Electronic Communications Code (ECC), introduced at the end of 2017, aims to reduce rental costs to the telecoms sector while ensuring that landowners receive fair payment – although this has, in some cases, led to legal wrangling and delays to roll-out. The Government has also recently confirmed that it will consult on proposals to simplify planning laws for 4G and 5G deployment, and it is important that Local Authorities are appropriately consulted.

The Greater London Authority (GLA) is playing its part, too. The Connected London Team at the GLA are working to improve coordination between boroughs and promote standardisation where possible⁹. The standardised wayleave developed by the City of London Corporation was a critical step forward, and the GLA has developed a Mobile Agreement Template for rooftops and greenfield to speed up the process of reaching agreement and reducing costs for all parties standardised.

London local authorities

A number of London's councils have taken action to support the effective delivery of digital infrastructure. While their interventions have differed according to local circumstances, in all cases success has been underpinned by having a digital champion within the council – often at the officer level – who has good relationships with planners and other stakeholders, and the ability to drive through change to council policies and/or practice. This can, of course, only happen if there is buy-in to improving this infrastructure from the leadership of the council.

We met with representatives from four local authorities (City of London Corporation, Hackney Council, Southwark Council, and Kensington and Chelsea London Borough Council) that have demonstrated best practice in the delivery of successful digital strategies. Further information about their respective approaches is overleaf.

⁹ You can find the GLA's London Connectivity Map and resources at the following links: (<https://maps.london.gov.uk/connectivity/>) and (<https://www.london.gov.uk/connectedlondon>)

City of London



- Broadband speeds in the City of London have historically been an issue for businesses, causing reputational issues relating to the attractiveness of operating a business in London's Square Mile. The City of London Corporation has engaged with broadband operators and is now 90% enabled for ultrafast broadband.
- But rolling out full fibre remains challenging. Complicated ownership structures in the City make negotiating access agreements through a wayleave very difficult. The Corporation has appointed an agent to provide key ownership data to help speed up the process of agreeing wayleaves.
- It has also created a standardised wayleave, which is being used as a template by many other Councils in London and around the country. This is helping to speed up digital infrastructure deployment around the UK.

Southwark Council



- The north-eastern area of Southwark Council, Rotherhithe, has historically suffered from very poor broadband infrastructure, leading to numerous complaints from residents.
- In response, Southwark decided to deliver its own full fibre network to its council housing stock of 53,000 units to future-proof all assets and ensure all housing stock had access to gigabit-fast broadband and full fibre. The Council secured a non-exclusive wayleave agreement and supplied a team to aid the providers in the delivery of roll-out.
- Southwark selected two operators to provide full fibre to social housing on condition of delivering social benefits to residents. This included full fibre access to all the Council's assets, the development of a digital skills programme and connectivity to all community centres.
- In the past twelve months, 70% of Southwark's 53,000 council homes have had full fibre infrastructure installed.
- The providers' fibre network to Southwark's council homes has widened their coverage, enabling future opportunities to provide gigabit-fast services to other properties.

Kensington and Chelsea



- The Royal Borough of Kensington and Chelsea has been keen to adopt Westminster’s full fibre broadband strategy, participating in “Wired Westminster” – meetings that are attended by fibre suppliers and property developers in London.
- Kensington and Chelsea promotes coordination between officials from operators and councils by sharing its major resurfacing plans and holding street works meetings with operators every three weeks.
- The Council is also on the verge of signing a borough-wide wayleave, which will help provide full fibre broadband to council housing across Kensington and Chelsea. This will lead to less bureaucracy and lower legal costs for operators seeking to deliver fibre to estates in the borough.

Hackney



- Hackney Council is currently embarking on a digital connectivity programme, hoping to boost connectivity to its social housing and attract tech sector SMEs to parts of the borough other than Shoreditch.
- Hackney is seeking to work with alternative network connectivity providers to roll out full fibre to its social housing stock of around 35,000 units through a non-exclusive master wayleave agreement. This is a similar approach to the one taken by Southwark Council.
- This will be an access agreement that will apply to Hackney’s entire social housing stock, bundled with additional social-value requirements. Any provider willing to meet these requirements would be able to agree a wayleave.
- Rolling out full fibre to social housing will also result in new fibre networks passing private sector housing and business premises, making connections available to those customers as well.

Engaging with local authorities

Delivering a speedy roll-out of digital infrastructure across London requires effective co-ordination between operators and local authorities. Open communication is vital to success, and it is important for operators to understand the challenges for council officers in their local areas. These include:

- Local authorities are subject to numerous financial pressures and this has impacted on resources available for digital strategies: London boroughs have had to deal with significant reductions in core Government funding and spending power since 2010. Over the decade to 2020, while overall public spending will have increased by 5%, London's local government will have seen its spending power fall by over a third in real terms per person¹⁰. The ECC has also led to a reduction in local authority revenues from site rents, and London will be excluded from any further funding from the Government's Local Full Fibre Networks fund. Accordingly, councils are focused on delivering priority services, reducing available resource to support connectivity teams.
- London's boroughs have very divergent characteristics: for example, poverty rates range from 15% to nearly 40%¹¹, and the proportion of over-65-year-olds ranges from 6% to 18.4%¹². Moreover, population density varies considerably from borough to borough, which impacts on the business case for investment. This naturally means that priorities will vary across different councils, and operators need to take account of differing contexts.
- Councils receive residents' concerns about digital infrastructure deployment: these include the way in which work is carried out; the cluttering of urban spaces; and worries regarding the potential deleterious impact of mobile infrastructure on health. The language operators use to engage is critical; where operators talk about deployment of "assets", local authorities are dealing with infrastructure on or around people's homes that impacts on their day-to-day lives.

¹⁰ London Councils, London's local services: investing in the future, November 2018

¹¹ Trust for London, Poverty by London local authority

¹² GLA Intelligence

Councils need help from operators to keep residents informed and to reassure them with respect to their concerns.

Championing the Benefits of Digital Infrastructure

Given the challenges facing councils, operators need to help boroughs convey the wider community benefits of faster, more reliable digital beyond faster download speeds for gaming and entertainment by providing case studies and examples of new technologies that are seen as indispensable.

These benefits include:

- **Improvements to economic growth:** for example, estimates suggest that investment in 5G networks, enabled by core full fibre infrastructure, will deliver £173bn in GDP growth between 2020 and 2030 in the UK¹³.
- **Increased number of businesses:** significantly improved connectivity can encourage new business start-ups. At a local level, if speeds are higher relative to other surrounding areas, new or established businesses may be attracted into the area. Evidence suggests this leads to an increase of between 0.4% and 3.2% in the number of businesses operating in an area¹⁴.
- **Direct benefits to local authorities:** the increased economic activity associated with full fibre infrastructure can have a number of benefits to local areas, both through some additional income (e.g. through business rates) and indirectly assisting local authorities with other objectives. For example, the increased economic activity could lead to a reduction in antisocial behaviour or deprivation¹⁵.
- **Promoting remote services leading to savings and improvements to public services:** Full fibre and 5G can facilitate innovations in the delivery of public services. For example, online delivery of public services can provide services that are easier, quicker and more convenient for people to use, and at a lower cost than other methods. One report estimated that the average cost of an online transaction was 8p, as opposed to £10.53 for a face-to-face transaction and £3.39 for a telephone transaction¹⁶. Moreover, a study by the Nuffield Trust showed that patients allocated to receive the telehealth intervention had fewer emergency hospital admissions; these

¹³ Future Communications Challenge Group, UK strategy and plan for 5G – Driving economic growth and productivity, 2017

¹⁴ Ipsos Moris (2018), based on an increase in connection speed of 100-200 Mbit/s; and Hasbi (2017), which estimated the impact of very high-speed broadband availability in the local area

¹⁵ Oxera, Impact at a local level of full-fibre and 5G investments, 2019

¹⁶ McNish J, Customer Contact Profiling Report – ESD Toolkit, Aston Campbell Associates, 2008

patients experienced an average of 0.54 emergency admissions, compared with 0.68 for control patients – a difference of around 20%¹⁷.

- **Smart Cities:** Full fibre and 5G systems will help future-proof the UK’s telecoms infrastructure and enable further city-wide “smart” innovations. The National Infrastructure Commission estimates that Smart power – built around interconnection, storage and demand flexibility – could save consumers up to £8bn a year by 2030, help the UK meet its 2050 carbon targets, and secure the UK’s energy supply for a generation¹⁸. Furthermore, research has suggested that Smart City solutions applied to the management of vehicle traffic and electrical grids could lead to large social benefits. In the United States, for example, it could produce \$160 billion in benefits and savings through reductions in energy usage, traffic congestion and fuel costs¹⁹. Councils could also use street-side smart innovations to monitor air pollution, which could then be used to warn citizens with health conditions such as asthma.

¹⁷ Nuffield Trust, The Impact of Telehealth on the use of Hospital Care and Mortality, 2012

¹⁸ National Infrastructure Commission, Smart Power, 2016

¹⁹ Accenture, How 5G can help municipalities become vibrant smart cities, 2017

Next Steps

Delivering ubiquitous, reliable, high-speed data across London by 2025 will deliver benefits to London's boroughs and residents, as well as its businesses.

National government needs to create the policy and regulatory environment to unlock investment and accelerate barrier-busting in digital roll-out. The Government should consider whether to give network builders the right to access property and install new connections if set procedures have been followed, as well as publish its response to the consultation on making it mandatory to connect new build homes to full fibre. Moreover, the business rates regime needs to incentivise investment in new fibre. An example of the way this could be further achieved is to extend business rates relief on new fibre for a longer period to support the Prime Minister's ambition to achieve full fibre coverage across the UK by 2025.

Some of London's boroughs have already shown strong leadership in improving the roll-out of digital infrastructure, adopting a joined-up approach to the digital planning process: nominating digital champions and developing local digital strategies which take into account local economic development, digital connectivity, sustainability, and social-inclusion considerations. Other examples of good practice include speeding up access through promoting standardised wayleaves and providing information on ownership, as well as utilising public assets to improve local connectivity.

Operators can play their part by working closely with boroughs to better understand the specific local challenges and help local authority officers make the case to leaders and residents by conveying the wider community benefits of digital connectivity through case studies and new technologies that are seen as indispensable. Much has been achieved, but there is a clear need for better communication between the public and private sector in many parts of London. Operators need to understand the perspective of local authorities – and, vice versa, local councils need to understand the logistical and commercial challenges facing operators. Accordingly, we are calling for the creation of a Full Fibre Task Force for London to bring together the GLA, boroughs, landowners, developers and operators to formalise regular engagement and drive an action plan to

achieve ubiquitous, reliable, high-speed data in London by 2025. London Councils would be well placed to facilitate and promote this task force.