



Date:	19 th January 2015
Classification:	General Release
Title:	Broadband Coverage
Report of:	Acting Head of Economic Development, Business & Growth
Cabinet Member Portfolio	Cross Portfolio
Wards Involved:	All
Policy Context:	Enterprising City
Report Author and Contact Details:	Steve Carr x6551 scarr@westminster.gov.uk

Introduction

- 1.1 This paper reviews fixed line broadband coverage in Westminster (ie: not mobile broadband). It proposes how the City Council could work with broadband providers, business organisations and residents groups to establish the reasons for those places and premises which lack access to good performing superfast broadband and to work with others which have also been expressing concern about broadband coverage and service in central London (eg: Central London Forward, the GLA, the West End Partnership, London First and the Federation of Small Business).
- 1.2 According to the regulator, Ofcom, only 47% of Westminster premises 'have access' to super-fast broadband - services advertised as over 30 Megabits per second (Mbps), the EU definition of superfast broadband. For those parts of the city which areas covered, there are significant patches of the borough where average broadband speeds appear to be poorer than in other parts of London. However, caution is needed on these statistics as the definition of what constitutes 'access' is unclear. For example this term may only relate to premises within direct exchange areas where fibre is being rolled out, rather than actual access to broadband cabinets which are actually connected to fibre. This coverage is remarkably poor given the intensity of 'dark fibre' in the centre of London, the network of fibre optic networks which are

primarily used to support major corporate companies with leased lines.

- 1.3 Broadband providers have been asked to attend the meeting and supply a short statement on their business model and views on the key issues which is available on request. The Federation of Small Business has also been invited as it is running a campaign on broadband access.
- 1.4 A debate on broadband in Central London was held in the House of Commons in September 2014. It was led by Mark Field MP, following which the Minister for Culture and the Digital Economy, Ed Vaizey, pledged support for faster broadband coverage in London. The Mayor of London has since picked up this dialogue (see below on actions) and following a Connectivity Summit in September 2014 attended by the Leader of Westminster City Council, the GLA established a Connectivity Advisory Group on which Westminster's Chief Information Officer, Ben Goward, now sits. The outcome of this committee meeting will therefore feed into Westminster's participation in both the CLF and GLA programmes.

Annex 1: International Broadband speeds

Annex 2: Map of BT Exchanges in Westminster

Annex 3: Example of Dark Fibre network in Westminster/London

Annex 4: Exchanges in Westminster, Profile of Connectivity (SamKows)

Context

- 2.1 UK cities lag behind world cities which have invested in fibre optic communications direct to the premises, and no UK cities are ranked in the top 50 cities for such connectivity. (Source: FTTH Handbook Edition 6, 18/02/2014, Fibre to the Home, Council of Europe). Download speeds in Hong Kong, Singapore and Paris are also far faster than in Central London. Karin Ahl, President of the FTTH Council Europe which represents cable industry: "The UK does not appear in the FTTH ranking because...the country has not yet reached the 1% threshold. FTTH is the only future-proof way to build broadband access networks...Governments need to make the right decisions for the future, not ones based on the past, in order to build it once, and build it right." The figures revealed that London's broadband speeds are failing to support its burgeoning digital economy. The top five European capitals broadband speeds are currently all two times faster than London. Bucharest tops the table with an average of 81.2Mbps.
- 2.2 The extensive copper network in the UK, which has until recently been able to carry compressed digital information at high speeds, is one possible reason for the slow development of fibre optic technology until recently. Legacy copper networks can deliver reasonable download speeds of up to 10 megabits per second (Mbit/s), with 4Mbits/s required to watch programmes on BBC iPlayer. The vast majority of BT exchanges were upgraded in the 1990s to run 'digital' ADSL technology which is capable of running at these speeds and some exchanges have ADSL2 capable of 24 Mbp/s. However, demand for bandwidth continues to grow by 10 times every 5 years, as residential consumers look for high definition TV and film on demand and businesses seek better upload speeds for transfer of documents and data (FTTH handbook, Edition 6). Telecoms and cable providers are therefore investing in fibre optic technology to provide services and are offering next generation 'superfast broadband', which both Ofcom and the EU defines as speeds advertised above 30Mbits/s. Cable operators use a mix of fibre optic and coaxial cable to transmit data to the end user, whilst fibre networks are mainly Fibre to the Cabinet (FTTC), which use fibre to transmit data from the exchange to the street cabinets and copper/aluminium to the premises and in some cases fibre direct to the premises (FTTP).
- 2.3 According to Ofcom, average broadband speeds have increased to 18.7 Mbit/s nationally and superfast service speeds have increased to 47Mbit/s on average, a leap of 26% between May 2013 and May 2014. Ofcom has recently reported that broadband operators described as 'cable' (such as Virgin) are now providing higher average superfast broadband speeds than 'fibre' to the cabinet operators such as those on BT's Open Reach system and BT Infinity. Virgin is offering superfast speeds of up to 152 Mbit/s (average of 141.9 Mbit/s) in some parts of the country.

2.4 In relation to business users, UK telecommunications regulation has successfully created a supply side competition in connectivity for London's large corporations who are prepared to pay for high bandwidth connections and leased lines. Competition has created a network of wholesale fibre-optic cables across London laid by a variety of companies under the telecoms act (the 'dark fibre' network). There is no map available and no study providing a review of the coverage or service is available from Ofcom. Intelligence on this wholesale sector is therefore difficult to chart. Coverage of such wholesale fibre technology is believed to be good in Westminster, given the number of operators working here (Venus, UK Broadband, Hyperoptic). However, there is a gap between this wholesale fibre-optic network and the retail network that serves small businesses and residential properties in London and there are clear geographic patches of communities which are not able to access superfast broadband. This is the main focus of focus of concern. Added to this is the inability of many businesses to access products such as BT's 'Infinity' packages, which have sharpened the debate about access and price of broadband in this part of London.

Broadband providers (examples, there are others)

3.1 **British Telecom** remains the main provider of broadband services. Following a ruling by the European Commission in the late 1990s, BT was required to open up its network and enter into leasing agreements with communications providers using its exchanges and street cabinets, but is not obliged to share its ducts that carry fibre cables. Fibre To The Cabinet (FTTC) in Westminster is therefore 'owned' by BT, which delivers fibre broadband from a range of providers who rent from it under what is called Local Loop Unbundling (LLU). Numerous communications providers thus supply broadband services over the BT Openreach network in this way, and increasingly this approach is the default for the emerging fibre optic networks. LLU providers in Westminster include Sky, Plusnet, BT, John Lewis, Zen and TalkTalk. A full status report on each exchange in Westminster from SamKnows consultants is contained in the annex to this report. Speeds are said to be as high as 100Mbps in parts of the city, depending upon location, provider and package. The remaining run to the premises is from copper wires, so this is a hybrid fibre/copper technology, rather than fibre to the home/business and not as advanced as the fibre networks being rolled out in major cities elsewhere in the world. There is a current debate about whether BT should also share its cabling ducts with other operators. The UK Competitive Telecoms Association has recently lobbied Ofcom and the Government on this issue, which is effectively a challenge to the OpenReach franchise that BT currently holds.

3.2 **BT's OpenReach programme** is the main way in which broadband connectivity is being delivered in the UK. BT is tasked by the

Government with covering two thirds of the UK by the end of 2015 via OpenReach, a target that is likely to be met early. OpenReach provides access to other operators than BT, under protocols regulated by Ofcom. The build programme is believed to be operating at full capacity, with labour and expertise being brought in from abroad to support the final leg of installation. BT is nearing the end of its £2.5bn investment programme, which the company says means “that 2.9 million business and residential premises in London now have the ability to access fibre broadband, in addition to business premises in London which have the ability to access business-grade connectivity services”. Media reports suggest that BT has reigned back on its fibre to the premises (FTTP) programme (originally set a 25% target across the UK, but now only 0.7% of the OpenReach network) and is now focussing on fibre to the cabinet (FTTC) instead. The Advertising Standards Authority recently cleared BT of any wrongdoing in advertising its retail product as being fibre, even though the run to the home/premises is usually copper.

- 3.3 According to Ofcom's last report, around 88% of London premises can access fibre broadband, mostly using the Openreach network, and this should rise to approximately 91% based on current investment plans. In addition, BT have recently announced additional investment in UK cities including London, so coverage will rise still further, but the company says, probably “not beyond 95% as the cost of provision of service to the remainder is unlikely to be economic for any provider”. It is not clear where the remaining 5% uncovered is located.
- 3.4 There is also an issue of how BT/Openreach assesses commercial viability, and if it does so according to the number of lines per cabinet and/or exchange. It appears that BT deem an exchange ‘commercially unviable’ when less than half of the lines are residential and there is no competition. That could be because the drop in revenue as business with from leased lines typically run at 10 to 20 Mbp/s whilst BT Infinity runs at around 70 Mbit/s download and 20 Mbit/s upload. The unusually large number of exchanges in Westminster (eighteen – see Annex) in addition to the high cost of connection, may well count against the likelihood of the four remaining exchanges without FTTC broadband connectivity being deemed to be commercially viable for BT. The exchanges that appear not to be programmed in for fibre (FTTC) are Howland Street (Soho), Mayfair, Whitehall and Westminster.
- 3.5 **Virgin Media** pulled out of its leased contract with BT in 2012 and having restructured and refinanced under new ownership and it is now rolling out its own programme of investment. Virgin Media’s network in Westminster exclusively uses FTTP (Fibre To The Property) broadband at speeds up to 100Mbp/s in some parts of Westminster, and up to 120Mbp/s in upgraded areas (industry newsletter, Fibrebroadband.uk web site). Virgin’s network in Westminster is not

extensive but it has approached the authority to learn more about demand, growth and development where it might work with the authority to extend its fibre network and several positive meetings have been held with the company to start this process. (Note: Virgin has a number of contracts with Westminster City Council to provide connectivity such as the Council's own data network and schools networking through the London Grid for Learning). BT also believed to have promised an extra £50 million of investment, specifically aimed at expanding coverage in urban areas.

- 3.6 **Community Fibre** was established in 2012 Westminster City Council and City West Homes (the Council's arms length affordable housing provider) created a new initiative with the private sector to bring superfast broadband to residents in social housing developments. Community Fibre has a business model that does not require public sector subsidies. It is already the largest provider of Fibre to the Home connections in London. This service started as a pilot of 1,000 properties but is now planned extended to cover 22,000 properties across Westminster and may also extend to investment in regeneration and renewal areas. The project aims to install a fibre optic telecommunications network into the Council's social housing and associated commercial property stock. This provides ultrafast (100 megabytes per second) broadband and television services (Sky and Freeview) via fibre to the premises. These will provide a package of both free and paid for television, telephone and internet services to the Council's residents and businesses, with charged services provided on a pay as you go as well as the 12+ month contracts usually required by other providers. Residents are not charged for connection and they do not have to take the premium services over the basic services. The scheme is now being extended to include local businesses which can access the fibre optic system via radio technology. Community Fibre has successfully connected businesses to superfast broadband which have complained to local Councillors about lack of access to BT Infinity.
- 3.7 **Sohonet** is an example of an industry-led response to the need for faster, better broadband services at speeds in excess of 100 mega bytes per second. It was founded in 1995 by a group of Soho based post-production companies as a community of interest network for the television, film and media production community. Sohonet links many of the British film studios to London's post-production community and also provides access to the internet, and private wide-area links to other countries around the world.
- 3.8 **Venus** is a Westminster business based on Oxford Street from where all of its engineers and apprentices work. Venus provides coverage across the whole of Westminster, offering fibre to the premises (FTTP) from local exchanges at speeds of up to 10Gbit/sec (ie 100 Mbp/s). The company report that it has connected around 1,000 businesses across London and expects to reach 10,000 by 2019. Its network map

is published on its website and customers can check availability. Venus is a very active user of the Government connection vouchers, having helped 150 customers to get this funding to date.

- 3.9 **Hyperoptic.** This company lays fibre to (mainly) residential premises, and has reached 75,000 homes on 480 sites with a target to reach 75,000 homes by 2018. In London, Hyperoptic's gigabit footprint now extends across the length and breadth of the city; from central riverside apartments, all the way to the developments situated near the M25. The service is also live in Cardiff and Bristol, and installations are underway in Manchester, Liverpool, Leeds and Reading. The company works in partnership with developers and builders such as Barratt, St George (Berkeley Group) and Regis. It offers packages of 2Mbps, 100 Mbp/s and 1 Gigabit (just over 1,000 Mbp/s).
- 3.10 **Universities and Incubators.** The other challenge for small firms are those in incubator units which often have to access broadband separately. Well managed incubator units have started to invest in fibre connectivity for their tenants. For example, those linked to the UCL/CISCO project have developed access to superfast fibre connection direct to the premises. Academic spin off enterprises have access to the academic JANET which is a global system. This is another possible future area for discussion in Westminster's strategy of improving access given the large presence of higher and further education in the city.

Government Policy

- 4.1 Broadband UK (the Government body promoting broadband and directing subsidies which reports to DCMS) aims for 90% broadband coverage by 2016, with fibre being provided past an additional 4.2 million premises under Phase 1 of the programme currently underway - both households and business premises. Some 44,000 additional premises are being passed each week, the fastest roll out of broadband in Europe.
- 4.2 The Government's broadband programme has been focussed on supporting access to high speeds in rural areas and secondary cities where DCMS/Broadband UK funding has supported installation. For example Durham has moved from 6% premises coverage to 26% in two years. The major metropolitan cities have not been the focus of this Government programme because the market is expected to address needs.
- 4.3 The Government (DCMS) has been running a broadband connection voucher offering up to £3,000 for small businesses with less than 250 employees and turnover under £40m a year (it assists with the cost of a leased line and fibre to the premises FTTP, average voucher). Westminster City Council has promoted this voucher through its direct mail to businesses and in newsletters. However, the take-up has been

patchy – across London 3,277 applications and 2,232 vouchers have been issued against a target of 4,260. London accounts for 40% total national value at present. Westminster has the highest take up and Virgin MB and TalkTalk are largest providers for those using the voucher but Venus has also been very active in promoting it. A further year of funding has been announced by Broadband UK (£30m nationwide) but we understand that this may not cover major cities. At the Birmingham Future Cities event on 5th December DCLG announced that there would be another £10m provided for cities, plus whatever is left unspent from current funds. Westminster is meeting BDUK on 12 January to press for more support in promoting the scheme in the city.

Why Broadband is Important to Westminster

- 5.1 All major cities require advanced broadband to compete internationally. Westminster is host to 49,700 enterprises, 65% of which are small or medium sized firms. Connectivity is especially important to cities such as Westminster with a high proportion of high growth firms in diverse sectors such as the media, design, digital and telecommunications. The City Council's last full Business Survey (2012) identified that nearly half (43%) of businesses in the city conduct the majority of their business online.
- 5.2 London has the biggest concentration of 'digital' businesses in Europe with 23,000 firms and over 390,000 employees in this sector (GLA 2012 study), with the vast majority of these being in Westminster, which has a far larger tech sector than either TechCity in Tower Hamlets or the City. However, employment growth in the sector does not appear to have increased relative to other sectors since 2005. It is not clear whether broadband access and speeds are a major factor in this growth rate over other issues such property and operating costs but it is often an issue cited in business surveys. According to a recent study by CBRE, growth of the digital, media, tech, creative sector now provides over 250,000 jobs in the centre of London (Westminster, the City and Tower Hamlets).
- 5.3 Many of these firms require super-fast broadband, over 98% of the UKs visual effects firms are in the Soho area of London bordering Covent Garden, which is one of the broadband 'not spots'. Although there is a private fibre optic network called Sohonet and there are other 'fibre to the premises' firms such as Venus, not all small and growing firms will be able to afford such connectivity. Such smaller firms rely on the main retail broadband providers such as BT and Virgin products and the other telecoms companies on the OpenReach network.
- 5.4 According to Federation of Small Business Annual Survey of London Boroughs Small Business Burdens "Among the potential issues facing London's small businesses, broadband quality and availability was seen as the most important, followed by the availability and quality of

public transport". Broadband quality and availability was seen as by far the most important issue to small businesses, with 58% of survey respondents saying it was very significant for their business and a further 26% stating it was quite significant. Around 65% of small businesses access broadband through a wired connection but FSB says that 12% have fibre-optic connection (there are no figures specific to London or Westminster). In addition, the London Chamber of Commerce and Industry has raised concern about the low poor broadband connectivity which it feels is compounded by the very poor 4G mobile connection speeds in London (set out in a recent report by RootMetrics).

Poor Broadband Coverage and Speeds

- 6.1 According to the regulator Ofcom, a large concentration of central London postcode areas are unable to even obtain BT Openreach's hybrid copper/fibre services (up to 78Mbps). Analysis Masons, who advise the Mayor of London and Ofcom, suggest that only 47% of premises in Westminster are covered by this next generation broadband service. BT Openreach's "Superfast Fibre Access" tool (www.superfast-openreach.co.uk/where-and-when/) confirms this uneven picture.
- 6.2 According to BT, there are eighteen exchanges in Westminster, of which four are not within its business plan to receive fibre-optic FTTC broadband services because they are not currently commercially viable, although the precise meaning of this is not clear to us. BT appears to assess commercial viability according to the business case over a ten to fifteen year return for each cabinet in relation to the existing number of lines it carries, the cost of connecting to power (which can be up to £40,000), labour costs and locational challenges. It is possible that no differentiation between residents and businesses is considered in considering demand for broadband. We would like to clarify this with BT in our future working with them.
- 6.3 The American research company Samknows which now monitors broadband across the UK provides detail on all connectivity by exchange. The full profile of each of the eighteen exchange is provided in the **Annex**. This reveals that coverage of fibre to the cabinet is good in Westminster other than in a few exchanges – Pimlico, Westminster, Whitehall, Mayfair Howland Street, Gerrard Street (Soho).
- 6.4 There are various web sites which capture self reporting on broadband coverage, speeds and connectivity 'at a reasonable price'. These sites are not an accurate portrayal of availability but give a picture of issues residents and businesses are facing. "Broadband Not Spot" website (www.broadband-notspot.org.uk/) suggests that there are substantial areas of Central London where users report that broadband speeds above 2 megabits per second are unavailable. Areas which appear to

face poor broadband include Belgravia, Pimlico/Vauxhall Bridge Road, Baker Street/Marble Arch, Covent Garden and Edgware Road/Church Street, Buckingham Gate/North Victoria area. There have also been reports on poor access in Paddington, St John's Wood, and also Clifton Villas, Randolph Avenue and Warwick Avenue and the whole of Westbourne ward in Westminster.

- 6.5 The take up of fibre optic broadband connectivity is only 16% in areas where fibre is provided on OpenReach. The demand for superfast broadband is therefore not a simple picture. BT point to a survey of demand for OpenReach in Techcity which it says showed that of 30,000 potential businesses, only 8 responded to the survey seeking information on improved superfast connectivity. Virgin figures are thought to be higher in areas where it has provided fibre availability because their service is currently driven by TV media demand from residents.
- 6.6 One reason for low take-up could be that speeds up to 10Mbps/s are available on ADSL lines and in some cases up to 24Mbps/without fibre optic support and many micro-firm firms can make use of this and pay premiums for large and periodic uploading within the pricing bands of their internet providers.
- 6.7 Anecdotal evidence reported to members and officers of Westminster City Council suggest that small firms have tried to access BT broadband but have found out that BT Infinity is not available to them, especially in Soho (Berwick Street) and Covent Garden. However, in response, BT has said that where it believes the cost is uneconomic it will assist companies and can offer to provide 'fibre on demand' - where a local cabinet has fibre - and if a businesses or resident group wishes to pay the difference between the economic and non economic cost.

Can Other Broadband Services Plug the Gap?

- 7.1 The newly formed Westminster Connectivity Group of officers has reviewed the options for improving other forms of broadband connectivity in the city, including wireless and micro-wave connectivity on mobile networks.

¹² **Wireless Metro** (02) Service Concession Contract – this is managed by WCC highways currently (£7m total contract value). Wireless Metro was installed prior to the Olympics to provide free Wi-Fi spots in parts of WCC that previously did not have coverage. This runs out in December 2017 and the exclusivity clause as expired – meaning that other companies can ask WCC to use our assets (lampposts etc) to locate technology. The installation of technology on WCC assets has to be considered in the context of public realm, conservation and ultimately commercial income generating considerations for the authority. The market is potentially large. Telecoms regulator Ofcom

has approved European Commission plans to make more airwaves available to mobile broadband users, by reallocating frequencies currently used by broadcasters to operate digital television services, such as Freeview. Ofcom estimates that 'demand for mobile data could be 45 times higher by 2030 than it is today, and this could create a rush among mobile operators to find assets on which to locate new equipment.

§ **Existing WCC Telecoms Estate** – this is managed by Corporate Property which has appointed Carter Jonas agents to assist in a commercial review of existing telecoms located on our estate. Current income is small, only £250,000 a year, but could grow significantly in future years. One of the opportunities here could be to market assets for 5G technology when it becomes available but the small cell coverage required for 5G would need many assets located densely in the urban centre of the city. This work could focus on the growing mobile broadband network. For example, Vodafone has announced plans for a broadband and TV service.

§ **BT Legacy Agreement (BT wireless City via SERCO)** – this contract was awarded in 2006 to support primarily Wireless CCTV operations for parking enforcement. It involves mobile cameras connected Wirelessly via BT antenna on WCC lamp columns. Along with a further legacy BT agreement, this contract is due to expire shortly and future options need to be commercially reviewed. BT is to be asked to clarify its position on this contract.

7.2 One of the issues for the authority is going to be to balance economic development with commercial/income generating objectives in relation to telecoms and broadband providers. At the recent Birmingham Smart Cities event it was reported by various providers (ITS, City Fibre and Hyperoptic), that they prefer to work with authorities who provided non-exclusive access and were more concerned with economic growth than short term revenue. Exclusive concessions were said to lead 'to lock-ins to current technologies' when the need is for inter-flexibility into the future.

Laying Broadband in Westminster Streets

8.1 Broadband providers point to the cost of providing fibre cabling in the street and provision of cabinets as the major cost barrier to extending their networks. Until Permitted Development Rights were introduced under planning legislation in 2012, providers required planning permission to locate boxes in the highway/pavement but now only need to get a highways permit to install and upgrade equipment. The impact of boxes in the highway, especially in conservation areas, has been a major concern for the authority and the Leader wrote to telecoms providers on this in 2013.

- 8.2 Westminster City Council never refuses new cable upgrades/installations. We do ask that installations in a certain location are deferred or undertaken in a different way due to our statutory duty to manage disruption in an area. If, for example, a street is being used to take considerable additional traffic as part of a diversion, we would require Virgin to not excavate it to install cables until demand was returned to normal. If a street had just been resurfaced we would allow the utility to dig it up for the new service (as we take a broad view of the definitions of exemptions to the protection offered to resurfaced streets under S58 of NRSWA) but would just ask for an upgraded reinstatement to minimise the impact on the street and public purse.
- 8.3 Because the location of boxes was taken outside of planning legislation two years ago and so the controls over the location of broadband telecoms boxes is through a code of practice which the Government asked the industry to produce (and which our Director of Planning helped compile). Control over the quality of reinstatement of pavements and the materials through Built Environment

Permit Scheme.

- 8.4 The London Permit Scheme is fully compliant with the 2007 telecommunications regulations as they applied at the time of the implementation of the Scheme. The DfT are now retrospectively updating the Regulations but that does not, at present, require London Boroughs to change their permit scheme. Officers are part of the working party, along with Virgin Media, that is advising the DfT on the new Guidance. The situation prior to the introduction of the Permit Scheme should be remembered. Utilities provided little to no notification of their works. Quality of workmanship was poor and information to the travelling and resident public was below standard. The utilities seek to return to this situation in an effort to reduce their costs.
- 8.5 London Boroughs were united in their view that the Scheme has to apply to all streets. If you do not apply the scheme to residential roads there will be a two-tier system, which will lead to certain works being poorly planned or managed and abandoned in favour of the main highway network.
- 8.6 The main benefits of the Scheme as it stands is to allow works to be co-ordinated. This reduces costs for utilities and contractors as they can “book road space”. Removing the Scheme from residential roads will potentially increase costs for utilities as it means they will have no certainty as to the potential to undertake works. Residents and businesses would also have longer-duration works interfering with their daily operations and with less notice of the activity.
- 8.7 Permits on residential roads are already more flexible than those on main roads. Works windows are booked with flexible start and end

dates so there is more operational flexibility to deliver their services without extra costs. The City Council has always prioritised residents' needs for new services and is known for being flexible in agreeing work programmes by utilities to accommodate their needs as best possible. The London Permit Scheme as operated by the City Council already applies discounts to Permits for work on main streets that are undertaken out of Traffic Sensitive times. The Regulations as they stand do not allow for the Permit Scheme to only be applied at certain times of day.

- 8.8 The charging of Westminster fees is at the maximum DfT-set levels but this is because, along with many other Boroughs, our actual costs were found to be higher than the maximum fees allowed. We have therefore had to set our fees below the costs that the matrix (approved by DfT and utilities) indicated we should be charging.

Reinstatements

- 8.9 The City Council leads national pressure for use of new and innovative excavation techniques. The claim made of resistance to new technology is not recognised by Officers and is rejected in the strongest terms. Most Highway Authorities have had difficulties with micro-trenching in the past as it has been used by cable companies to lay communications cables just below the surface of the highway in locations that are poorly recorded and liable to damage by third-party works or other surface damage. Concerns were raised at the hazards to operative digging the road and finding unexpected cables at above normal depths. Councils have also been concerned at the reliability of supply that their residents or business enjoy from such shallow cables. However, Westminster City Council has allowed such technology in the past and is keen to work with fibre broadband operators and other utilities to improve its use.
- 8.10 Another complaint from broadband providers in the past has been the cost of parking whilst carrying out works. The City Council only charges a significantly reduced rate for parking suspensions to utilities. It is accepted by the City Council that utilities have a statutory right to work in the highway and the reduced charges aim to assist them in their works by enabling them to have surety of access to the highway for their planned works.
- 8.11 The Council only charges a flat administrative rate for suspensions by utilities. This covers the provision of suspension signs on street and enforcement against incorrectly parked vehicles. Non-utilities would be charged a daily charge per bay and, in the case of paid parking, any loss of income. Utilities do not face charges for loss of income or daily charges.

What Can be Done?

What the Mayor (and GLA/LEP) is doing

9.1 The Mayor's Connectivity Summit in September was attended by the Leader of Westminster City Council. The Mayor has commissioned a programme of work with which Westminster is now engaging and which includes:

- **A Wired Property Scheme for London** based on ones run in New York and Hong Kong. Commercial property owners self register properties and receive a bronze, silver, gold rating to help maximise rents and attract occupiers based on the quality of connectivity. We are talking with Westminster Property Association about supporting this scheme in the city. The GLA is going out to tender to seek a partner.
- **Stimulating Demand** – extension of the current Government/DCMS voucher scheme. London accounts for 40% total national value at present. However, DCMS only provided capital to local authority and other administrators of the voucher scheme not revenue so advertising and promotion have been constrained. Lobbying is now required to secure further voucher funding

What the City of London is Doing

9.2 The City of London's connectivity to the Open Reach network is far lower than Westminster's. As in Westminster, many major corporate businesses in the square mile pay for dedicated leased lines from BT (ethernet coverage) and other providers and so the wider network is not as in demand. However, many small firms require broadband and cannot find provision currently. The City has traditionally resisted the location of street cabinet boxes on its streets because of safety and terrorism concerns. It has therefore been working with BT/Open Reach on a new approach which brings fibre to the basement of offices (known as FTTB). Fibre to the basement avoids the need for street furniture, civil engineering works and road closures. The City of London's new Connections Charter is attempting to establish wayleave agreements between landlords and Telecoms companies and is hoping to overcome indemnity caps. BT is testing two locations with the aim of providing download speeds of up to 80Mbps for homes in Middlesex Street Estate and to 50 SMEs based at 65 London Wall. BT committed to working with the City of London to investigate how new forms of technology can benefit local SMEs. The City is also done a building by building survey of connectivity, making the results available to would be suppliers.

What York City Council is Doing

9.3 Several ISPs have announced joint initiatives to fill gaps in broadband provision, most recently in York, where four telecoms groups (Sky,

TalkTalk, CityFibre and Fujitsu) have revealed plans to build a fibre to the premises (FTTP) network capable of delivering speeds of up to 1 Gigabit per second (1 Gbps). York City Council is also working with these providers and has been strategically reviewing its role in promoting the market. This project is the 'biggest challenge yet to BT's dominance of the UK's fixed-line communications market' according to media reports.

What More Could Westminster City Council Do?

9.4 A Westminster Connectivity Group has been established. The group is looking at connectivity in the round including broadband. This work will be led jointly between Growth Planning and Housing (economic development and housing), City IT and Operational Services and Communities (street works/highway teams). Some of the workstreams that have been identified include:

- § **Hold a Connectivity Summit specific to Westminster** – inviting providers and others to collaborate on solutions and make recommendations back to the authority by the end of 2015.
- § **Continue to press for clarification on the data used on connectivity and speeds.** For example, how does BT measure connectivity when a customer has a number of phone lines but chooses to enable only one for Broadband? If a business has four BT lines but is then upgraded to enable broadband on one line with BT but the other lines with other companies does BT count this as 100% upgrade or only partial? What is the basis for determining commercial viability by premises, cabinet and exchange? What are the average speeds over time over OpenReach at different times of day and the week?
- § **Map current levels of connectivity in Westminster** using a combination of self-reporting (perhaps using business improvement districts, networks of start-ups and SMEs coordinated through the supported workspaces supported by Westminster's Civic Enterprise Fund and neighbourhoods as a means of collecting information) and data secured from industry and other sources to identify underserved areas and to use this information to understand the factors underlying this. Part of this will be to produce a map of where fibre-optic broadband has been laid to date and will be laid (albeit taking into account commercial sensitiveness on future build plans). We are also looking at legal powers. Local Authorities have powers under security legislation to map utilities (as was done under the Olympics) which could be looked at as a legal basis for demanding that all broadband providers provide full and transparent maps of their cables and equipment across the city to read against the connectivity reports.

- § **Continue to promote the Government Voucher scheme using Council publicity.** Take-up has been better in Leeds and Bradford where the local authority promoted take up with a leaflet to all business rate payers. We are meeting Broadband UK on 12 January to stress the need for more marketing of the scheme as no revenue funding from BDUK or DCMS was provided to support promotion of the voucher scheme.
- § **Promote the GLA's 'Wired Property Scheme'** based on a successful initiative in New York, with gold, silver, bronze 'rating scheme' for property owners which will enable owners to market their buildings to occupants according to the quality of digital connection. This is expected to stimulate demand for broadband. (The scheme could also be extended to add ratings for existing old technology such as copper and aluminium as well as fibre). Some property owners may also seek to pay for and install fibre to the premises in order to provide Ethernet connectivity to tenants. The GLA is procuring an agency to run the programme and Westminster can work with that agent.
- § **Review use of Council Assets and Property** to improve connectivity and engage commercially with operators. We are moving away from a concession approach to broadband providers to a negotiated approach. We have appointed Carter Jonas to advise the authority on commercial relations with telecoms providers relating to WCC assets. TfL is looking to commercialise its asset base and is moving away from a service concession approach to working with telecoms and cable/fibre companies. BT has a legacy agreement with WCC and Ofcom through which they provide antenna on WCC lamp columns with fibre connections back to an operator in BT exchanges, this being an alternative to cabinets in streets. We believe that BT is seeking to extend this contract (TBC).
- § **Develop an understanding of the implications of new technologies**, particularly development of mobile broadband "5G", the next major phase of mobile telecommunications which might take the form of super-fast mobile networks requiring dense networks of base stations in urban areas, or converged fibre-wireless networks with "short" wireless connections to a fibre network via "access points".
- § **Re-issue our statement on Street Works in Westminster for broadband providers.** Work with the providers to identify current and future implementation issues, such as management of streetworks (including the scope for "microtrenching"), use of street furniture as access points, planning policies to facilitate connectivity in new developments and exploring options for cost sharing (in implementing public realm projects, for example).

- ∞ **Ask Ofcom to clarify its view on coverage and set a target for Central London.** In particular, whether how proactive it can be to encourage collaboration between operators. For example it is unclear whether BT lets other operators share its ducts under the PIA (physical infrastructure access) obligations at prices which those operators accept are in their interests. Sharing of ducts would avoid several operators competing to lay their own fibre in the same streets and we would encourage more cooperation between providers on this issue.

- ∞ **Encourage new and smaller entrants into the market** in those areas where main providers are not connecting small firms and residents to superfast broadband or providing adequate and consistent upload and download speeds. This would need to be tested legally, but could be justified as compliant with European state aid grounds and UK competition grounds if a case can be demonstrated that there has been 'market failure' and such public sector intervention is required. Such an approach would need to be built up from demonstration of demand from business and residents and selection of areas where there is no adequate coverage. (In the meantime, it appears legitimate for the authority to signpost residents and businesses to 'alternative' providers, where main broadband providers have been able to connect to standard superfast broadband products, although the that would require us to signpost to all providers available in order to not to distort the market).

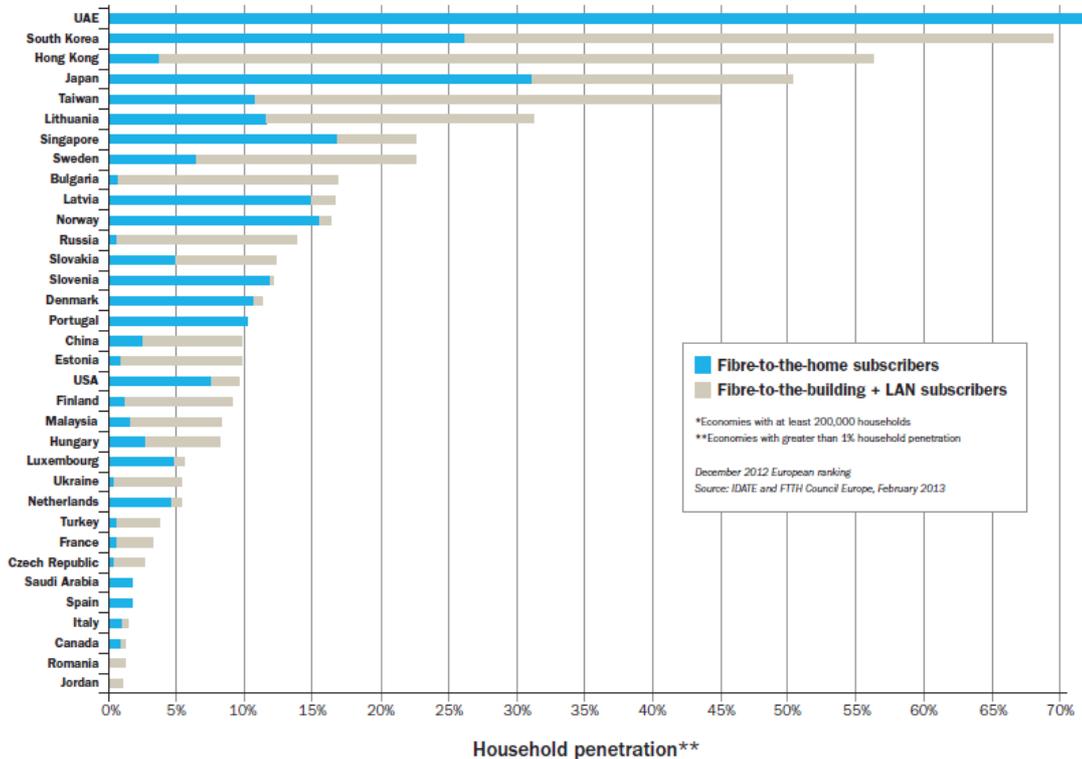
**If you have any queries about this Report or wish to inspect any of the
Background Papers please contact Steve Carr**
scarr@westminster.gov.uk

BACKGROUND PAPERS

Nil return

ANNEX 1: Broadband in Other World Cities

Global economies* with the highest penetration of fibre-to-the-home/building + LAN



- The high quality of the UK's legacy copper network has delayed UK fibre roll-out.
- The UK does not even appear in the top 30 of fibre enabled global economies.

Source: The Light Age, Volume 5, February 2014, Fibre to the Home Council Europe

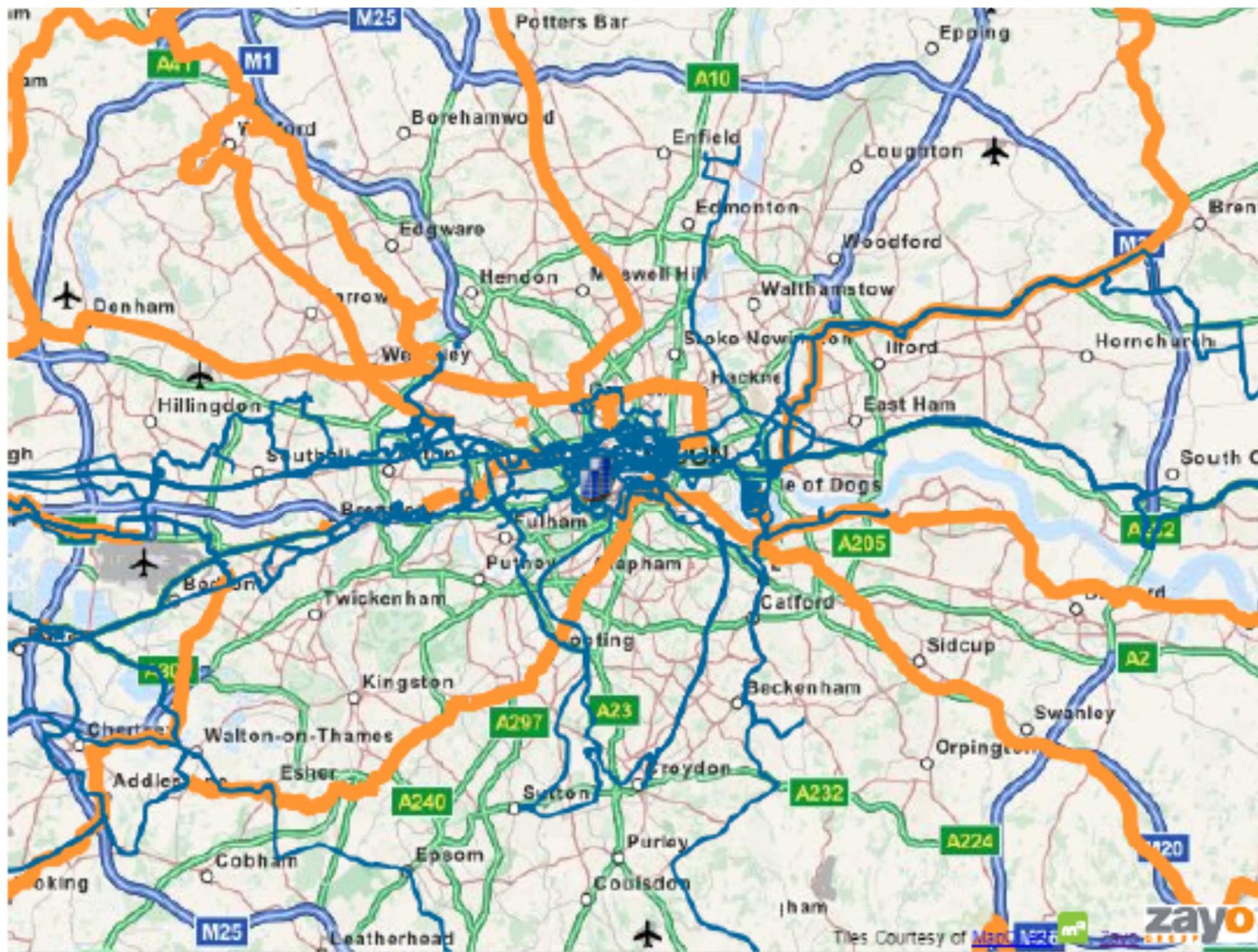
ANNEX 2: MAP OF BT EXCHANGES IN WESTMINSTER

Exchanges with Fibre to the Cabinet: Bayswater, Belgravia, Covent Garden, Gerrard St, Kensal Green, Lords, Maida Vale, Marylebone, North Paddington, Paddington, Pimlico, Primrose Hill, Sloane, South Kensington.

Exchanges without Fibre to the Cabinet: Howland St, Mayfair, Whitehall, Westminster



Annex 3 (Example of 1 Dark Fibre network in London – blue lines)



Map of Zayo fibre routes across London

