



## Local Broadband Access

A Briefing for Parliamentary Candidates  
March 2010

### Summary

You will know if the availability and quality of access to Broadband is of concern to voters in your constituency. What you may not know is whether their concern is as consumers or as home-workers, local employers, seekers of better access to online services, carers or service deliverers. You may also want to know rather more about the quality and choice of service available or planned. The reality is that these vary between and within constituencies, by service deliverers and, in the case of quality of service, even by time of day.

If their concerns are such that you need to be able to comment knowledgeably during your campaign and promise to make this a priority after the election, you need to know some of the answers – or at least where they can be obtained. The objectives of this short paper are to summarise some of the key points, explain where you can find out more and provide contact details for those who can help.

### Why Does Access to World Class Broadband Matter?

- **Broadband creates jobs and fuels economic growth.** The World Bank<sup>1</sup> estimates that every 10% increase in broadband penetration results in a per capita increase in GDP of over 1%. Small firms need access if they are to be part of the supply chains for big business or the public sector<sup>2</sup>. Farmers need access if they are to sell to supermarkets. Home-workers need access to work at all. Access is a pre-condition for getting new employers to even consider moving to your area.
- **Children with broadband access do better at school.** Canada, Japan, Korea, the US and Australia, even Uruguay, are among those nations which see online access, from home or village, to national and international learning networks as central to the future employability, let alone prosperity, of their children. Access to lifelong learning and skill updating similarly enhances the employment prospects of older age groups.
- **Lack of access reinforces social exclusion.** A recent report<sup>3</sup> prepared for Martha Lane Fox, the Champion for Digital Inclusion, identified that *“Households offline are missing out on savings of £560 per year from shopping and paying bills online.”* Some businesses even penalise customers who can't or won't communicate with them over the Internet. It is typically the deprived and the elderly who are most impacted.
- **Better access to health and welfare at lower cost.** Reliable access (including mobile broadband) enables doctors, nurses, community workers and carers to spend more time with those who need them, making bookings and updating records while at the community centre or visiting the patient. Telemedicine and remote monitoring, including systems that enable treatment at home, are critically dependent on the availability of reliable bandwidth.

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<sup>1</sup> *“Information and Communications for Development 2009: Extending Reach and Increasing Impact”*, World Bank, 2009

<sup>2</sup> *The Federation for small Business says that all small firms need at least 8 Mbps*

<sup>3</sup> *“The Economic Case for Digital Inclusion”*, Champion for Digital Inclusion, October 2009

- **Access to public sector services to enable more to be delivered for less.** Major savings can be made from providing reliable, local, online access to public sector services, for instance via the local community centre or post office for those who need a trusted intermediary because they cannot use a screen, keyboard or telephone themselves (as is the case for most of us when we get old and frail). Add in the use of mobile broadband and wireless (terrestrial and satellite) and it should be practical to bring more services to people and save money at the same time.

### Access to Broadband in Britain Today

Approximately two thirds of UK households now have a “broadband connection”<sup>4</sup>. Approximately 30% of those connections currently deliver download speeds of 2 Mbps (megabits per second) or less<sup>5</sup>, most deliver an average of 3.9 Mbps (versus a headline of “up to 8 Mbps”). 14% deliver an average of 9.3 Mbps (v. “up to 20 Mbps”). Upload speeds range from 400 – 700 Kbps (kilobits per second). All speeds drop by about 25% in the evening when our children go online. Capacity problems over “backhaul” to Internet Service Providers also limit response times and have led to rationing, with caps on files sizes and data volumes.

Why does this matter? The speed and reliability of broadband services affect customer experience. Action to improve local access may not lead to the expected improvements if problems with backhaul capacity are not also addressed. Using Ofcom figures for national average delivered speeds<sup>6</sup>, it will take about half a second to download a typical webpage (250 Kb); 10 seconds to download a music track (5 Mb); a minute to download a video clip (25 Mb); 25 minutes to download a low resolution 90 minute film (750 Mb) and over 2 hours to download a DVD/HDTV quality film (1 Gb). When parents and children share the same household connection the times can be doubled or trebled.

The investment programmes announced by BT and Virgin Media should enable services with headline download speeds of up to 100 Mbps or so, and delivered (i.e. actual) speeds about half that, to be available to about 40% of the population over the next few years. A 2 Mbps “universal service commitment” will help meet the needs of those who cannot obtain any broadband connection at present. But it is still unclear whether this is to be a guarantee of at least 2 Mbps or an “up to 2 Mbps” service, with delivered throughput varying according to contention ratio<sup>7</sup>, time of day and other factors.

Hence the pressures for “Next Generation Access” (NGA) or “Super/Ultrafast Broadband”. Some define this as download speeds of “up to” 20 – 40 Mbps (enough to watch Internet TV) but only 700 Kbps upload (not enough for Granny to watch the children’s party over her screen). For others it means 100 Mbps or more, symmetric (i.e. both up and down): to facilitate telemedicine (using high-resolution medical imaging), enable home based graphics designers to work interactively with colleagues or allow local businesses and councils to make full use of “Cloud” computing, with document and image sharing and transfer (e.g. citizens’ access to council papers or to e-mail photos or videos of problems for action) as opposed to basic transactions (e.g. driving licence renewal)<sup>8</sup>.

The Government’s Digital Britain initiative recognised that broadband is an essential utility, with its plans to use the surplus digital TV switchover funds to provide a basic 2 Mbps broadband access capability to all by 2012, ending the online exclusion faced by communities in rural areas. The success of local loop unbundling means the UK is 9<sup>th</sup> (out of 30 in the OECD tables) in availability of first generation broadband and 6<sup>th</sup> on price but 18<sup>th</sup> on speed<sup>9</sup>. A side effect of unbundling has been to discourage new infrastructure investment. That in the UK has been among the lowest in OECD nations over the past five years. Estimates for the cost of catching up range from £5 - 29 billion.

<sup>4</sup> “The Internet in Britain 2009” Oxford Internet Institute

<sup>5</sup> “UK Broadband Speeds 2009” Ofcom; those with headline speeds of 2 Mbps plus “up to 8Mbps” delivering under 2Mbps

<sup>6</sup> Delivered speeds are actual download speeds as opposed to headline speeds which tend to be maximum download speeds.

<sup>7</sup> The contention ratio is the maximum number of people sharing the common infrastructure:

<http://www.broadbandwatchdog.co.uk/contention.php>

<sup>8</sup> <http://www.computerweekly.com/blogs/when-it-meets-politics/2010/02/the-fog-over-grimpen-mire-clou.html#more>

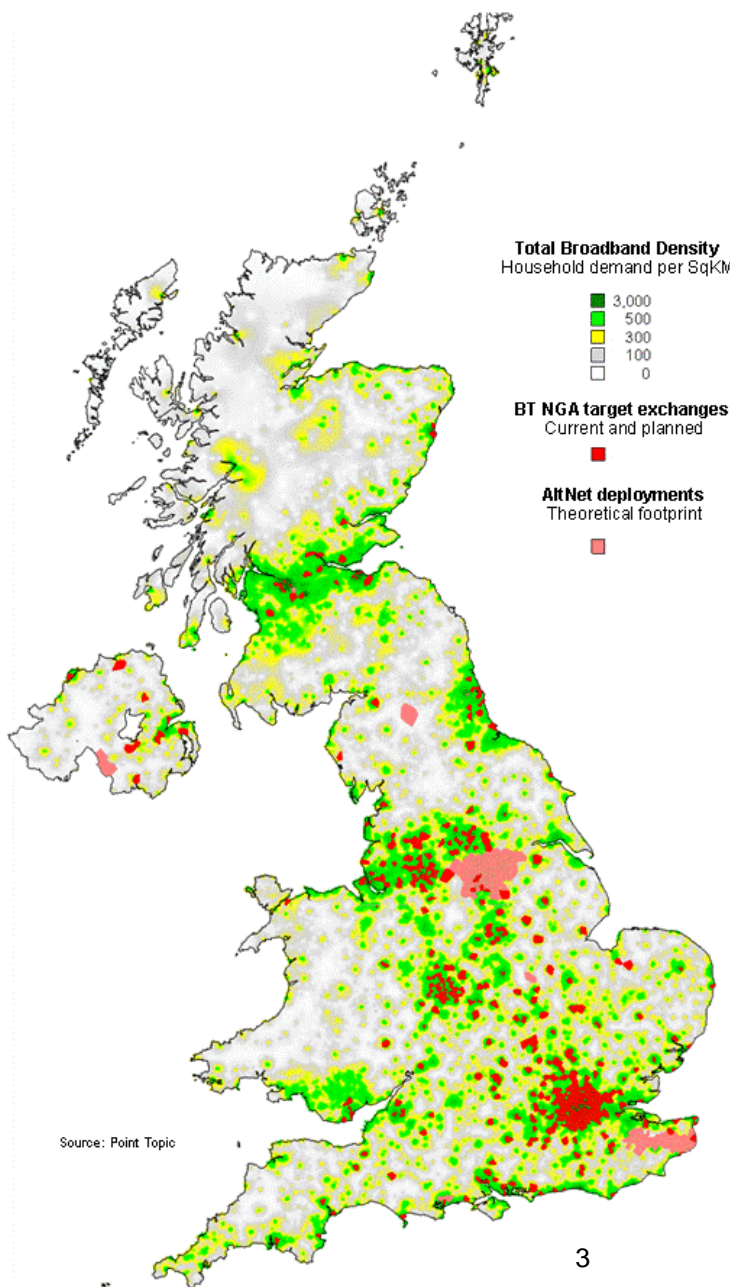
<sup>9</sup> “Next Generation Connectivity” Berkman Centre for Internet and Society at Harvard University

Two private sector initiatives dominate access plans in the UK:

- Virgin Media has upgraded its cable network to support speeds of up to 100 Mbps. Trials of up to 200 Mbps are also underway. The Virgin Media network passes around half of the UK's homes, mostly in larger cities, towns and urban areas.
- BT has announced plans to offer "superfast broadband" services to around 10 million homes by 2012, around 40% of the population. It will offer a mixture of fibre to the street cabinet, which will provide up to 40 Mbps at present and fibre to the home of up to 100 Mbps. 25% of the homes to be passed should be able to receive the "up to 100 Mbps service".

There are also local and regional initiatives, the largest of which is the South Yorkshire Digital Region, a public sector-led initiative with significant investment by, and involvement of, the private sector. The investment climate is, however, such that few are prepared to invest in new infrastructure and fewer still prepared to spend time and effort overcoming the various regulatory and political barriers. In the course of the recent competitive tender to supply Cornwall, two of the final three shortlisted bidders dropped out as regulatory and political decisions destroyed their business case, despite the availability of up to 79 million euros from the EU. BT was left as the only player to submit a firm proposal.

Point Topic, a UK company that monitors the broadband market, has mapped out the phases of BT's and other NGA plans.



It shows that BT's investment plans focus on the same densely populated, commercially attractive urban areas as those of Virgin. This could create a greater digital divide than first generation broadband, affecting over half the country. The Government has proposed to charge consumers 50 pence (plus VAT) per month, per fixed line to create a £1.5 billion fund to be used to reach those areas. Whilst any funding is welcome, many industry experts believe that the Digital Britain Fund is insufficient to address the digital divide properly. The Business Innovation and Skills Select Committee has strongly criticised both the proposed line charge and the application of business rates to new entrants using the "Tone List" method while charges to BT are based on "receipts and expenditure"<sup>10</sup>.

The Conservative focus is on removing barriers to investment, reducing the cost of entry by opening up access to BT's existing local infrastructures (e.g. masts, poles and ducts) and using that proportion of the BBC licence fee dedicated to digital switchover if the market cannot deliver.

<sup>10</sup> BIS Select Committee Broadband Report HC72

Most urban constituencies appear likely to be served by BT, Virgin and others. Those in less densely populated areas face a less certain future. Many local authorities are unwilling to stand by and let “market failure” damage the future wellbeing of their communities. They are considering taking the lead in building new infrastructure but funding is sparse, state aid issues are complex and few have the in-house skills to deliver. Local authorities can, however, use their spending power, combined with wider initiatives, to aggregate local demand; creating demand certainty which will reduce the risk and therefore funding cost of private sector investment. This will also reduce the public subsidy requirement in those areas where the market is unlikely to deliver on its own.

## **What Can YOU Do?**

### **1) Check what is happening in your constituency.**

Most urban constituencies are likely to be covered by the plans of Virgin Media:

- <http://pressoffice.virginmedia.com/phoenix.zhtml?c=205406&p=irol-whereWeAre>
- or BT's Next Generation Access products: <http://www.ispreview.co.uk/story/2010/01/21/bt-reveals-superfast-uk-isp-fibre-optic-40mbps-broadband-prices.html>

But you should check. There are problems with some inner city areas, sink estates and even a few leafy suburbs and it would be well to know if these are in your constituency. Services like <http://www.broadband-notspot.org.uk> can help. The situation in rural areas is more complex. You need to know if your constituency is among those which might be connected “if there is a business case” or is part of the “final 10%”, unlikely to be served without public sector subsidy.

Your constituency may be in an area targetted by one of the regional initiatives, such as South Yorkshire Digital Region, G-ti (Gateshead) and Light Speed Derby, or they may be served by a satellite service such as Avanti<sup>11</sup>. Local councils, regional development agencies and local economic development officers are good sources of information on the status of broadband locally.

### **2) Check the policy statements of your party.**

**Conservative:** [www.conservatives.com/News/News\\_stories/2010/01/Conservatives\\_to\\_deliver\\_nationwide\\_superfast\\_broadband\\_by\\_2017.aspx](http://www.conservatives.com/News/News_stories/2010/01/Conservatives_to_deliver_nationwide_superfast_broadband_by_2017.aspx)

**Labour:** <http://www.culture.gov.uk/images/publications/digitalbritain-finalreport-jun09.pdf>

**LibDem:** <http://www.nickclegg.org.uk/siteFiles/resources/PDF/Policy%20Briefing%20-%20Culture%20Media%20Oct%2009.pdf>

### **3) Look at the lobbying positions of the current and would-be suppliers (infrastructure and content as well as operations) and the case studies on what they have already delivered as well as what they promise for the future.**

The Information Society Alliance has created a resource page with more detailed information on the applications and benefits of broadband, case studies, relevant initiatives in the UK and background on the technologies, social inclusion aspects and the impact of broadband on communities. This is at <http://www.eurim.org.uk/activities/commspol/broadband.php> and also has links to other sources of information. The Alliance also has plans for a briefing programme after the election. Contact the authors of this report, c/o [eurim@eurim.org](mailto:eurim@eurim.org) for more information on these.

### **4) Make up your own mind and lobby your party accordingly, being ready to work with your supposed opponents after the election.**

This is a topic where you may well find more divisions within your own party, even on whether it is important, than between yourself and your opponents.

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<sup>11</sup> <http://www.avantiplc.com/broadband/satellite-broadband/index.php>