



LOCAL INITIATIVES ON NEXT GENERATION ACCESS IN THE UK

INTRODUCTION

In September 2008, the Communications Consumer Panel – previously known as the Ofcom Consumer Panel - issued a position paper entitled “**What is the value of next generation broadband?**”

In that paper, we stated: *“Any large-scale investment programme by the private sector at this stage will be predicated on a roll-out to significantly less than 100% of UK homes. We believe that the question of how to deliver next generation broadband to homes likely to be outside such private sector investment plans cannot be left until some indeterminate point in the future; instead we must debate the issues now - and so avoid the possibility of creating a second physical digital-divide. We want to encourage exploration of public sector and other non-private interventions even at this very early stage, alongside commercial developments.”*

In this note, the Consumer Panel has collated information on the range of local initiatives now taking place in the provision of next generation access (NGA) networks in order to indicate to interested parties just how many such schemes – almost 40 - there are and how they can contribute to the national debate on the roll-out of NGA.

LONDON

Openreach – BT's local access network division – has announced the two sites for operational pilots of fibre to the cabinet (FTTC) to begin in summer 2009. One of the two exchanges will be in **Muswell Hill**, London and the pilot will involve up to 15,000 customer premises. End user customers in this trial will experience headline speeds of up to 40 Mbp/s. As well as this consumer trial, Muswell Hill will be used for some technical trialling to complement that taking place at Foxall. BT expects to announce detailed plans for the initial market deployment of the Openreach product in early 2010.

Link: Openreach announcement

<http://www.openreach.co.uk/orpg/news/productbriefings/nga/nga003.do>

In **Wembley**, north-west London, Quintain Estates and Development plc is the company behind the continued regeneration of the area of land either side of Olympic Way leading to the new Wembley Stadium. The development will include some new housing and optical fibre may be used to link up these homes to the Net.

Link: New Wembley development <http://www.new-wembley.com/>

Looking more to the future, the **Olympic Village** being built in East London for the Olympic Games in 2012 is expected to deploy local fibre connections. Once the Games are over, the village will be converted to homes and again fibre will be provided.
Link: 2012 Olympic Games <http://www.london2012.com/index.php>

SOUTH-EAST

Fibre to the premise (FTTP) is being deployed in the **Ebbsfleet Valley** part of the Thames Gateway project in Kent. BT Openreach will supply the infrastructure, but BT Retail and its competitors will be offered access to the high speed lines on a wholesale basis. The top available speed will be 100 Mbit/s. However, it will initially be limited to around 600 new houses. The development will eventually have some 10,000 homes and up to 9 million sq.ft. of commercial offices, retail, leisure and community facilities, but the whole project could take until 2020 to complete.

Link: Openreach

http://www.openreach.co.uk/orpg/products/newproducts/fttp/downloads/6332_Ebbsfleet_Proof%203.pdf

A company called Independent Fibre Networks Limited (IFNL) is providing fibre systems to local developers around the country. For instance, there is a housing development in **Hampshire** (near Andover) where IFNL is providing a FTTH scheme.

Link: <http://www.ifnl.net/index.php>

Ashford in Kent is the lead area in the South-East with ambitions for fibre infrastructure to attract inward investment.

In **Milton Keynes**, FREEDOM4 is seeking to implement (in partnership with the local council) a WiMax wireless network capable of serving at least 90% of the MK urban part of the administrative area with the future potential for deploying outreach into the smaller outlying villages in future.

SOUTH-WEST

Fibre firm H2O, which provides fast broadband via the sewers, has announced that it can provide a service faster and cheaper than traditional delivery methods.

Bournemouth has been selected as the first such exercise. This will be the largest Fibrecity project in Europe and the company will be funding and providing the network at a cost of around £30 million. The fibre will provide ultra high bandwidth to all Bournemouth's businesses and more than 88,000 homes at speeds far exceeding current DSL or cable modem speeds.

Link: H2O Bournemouth <http://www.h2o-networks.uk.net/news/?news=Bournemouth-becomes-the-UKs-first-Fibrecity>

Although it is at a very early stage, a fibre to the home (FTTH) scheme has been proposed for a place called **Bradley** - a hamlet situated in the Candover valley roughly in the middle of a triangle bounded by Winchester, Basingstoke and Alton, that has multiple communications problems. A local resident has, through his consultancy Aanonxe, done some bid evaluation work for the European Social Fund. It is understood that Hampshire County Council has a knowledgeable partner willing to assist the project dubbed Bradnet.

In **Bristol**, the Community Broadband Network (CBN) has had discussions with Connecting Bristol, the city council Digital Challenge initiative, in relation to proposals for

30,000 new homes in the south of the city. They are interested in investigating an NGA infrastructure in part to avoid thousands of additional commuters travelling into the city centre. CBN has involved a master-planning consultancy LDA Design and expects initial feasibility work during the second or three quarter of 2009.

Link: Connecting Bristol <http://www.connectingbristol.org>

What ACTNow did for first generation broadband, Convergence is in part expected to do for next generation broadband in **Cornwall** and the **Isles of Scilly**. Convergence is the new European economic regeneration programme that runs until 2013. Convergence consists of two funds: European Regional Development Fund (ERDF) and European Social Fund (ESF). Digital investments will deliver “the roll out of improved broadband technology” and “access to 'future proofed' IT infrastructure”.

Link: Convergence <http://www.convergencecornwall.com/>

MIDLANDS

LightSpeed **Derby** is a project with two ambitious targets for this Midlands city. By 2012, it would like to have a locally managed core fibre network linking up the premises of all public sector agencies, all major businesses, business parks, and all major new developments. By 2016, it would like to have next generation broadband access available to 100% of households.

Accelerate **Nottingham** is leading a group of its partners which has a clear desire to implement municipal wireless (MW) and next generation access (NGA) networks in the conurbation of Greater Nottingham. The partners in Accelerate Nottingham, particularly Nottingham City and Nottinghamshire County Councils, the PCT, Nottinghamshire Police and Nottingham Trent University), already understood some of the benefits that NGA and MW networks offer, and they asked for the help of the Community Broadband Network (CBN) to take this forward, finding the best route to promote broader engagement.

Links:

Accelerate Nottingham <http://www.acceleratenottingham.com/>

Community Broadband Network <http://www.broadband.coop/Delivering-better-public-services/Making-Next-Generation-Access-and-Municipal-Wireless-relevant.html>

Walsall Regeneration Company is leading the way in developing the first community-owned fibre to the home (FTTH) project in the West Midlands based on the 'OnsNet' scheme in the Netherlands. WRC is planning a major new business development in the centre of the town including high speed fibre connections. The Community Broadband Network (CBN) was asked to produce a scoping study looking at the potential for a FTTH project in Birchills, a poor community next to the centre. This was followed up in July 2008 with a successful one day conference bringing together local stakeholders from the housing, health, education, business, regeneration, social enterprise and other sectors. Kees Rovers from OnsNet in The Netherlands was one of the speakers.

Link: Community Broadband Network <http://www.broadband.coop/Projects/>

Digital **Birmingham** identified the need for specialist advice and input on NGA issues and engaged the Community Broadband Network (CBN) to undertake a short project to outline the issues and opportunities for developing a viable approach to the development of next generation broadband services in the city. CBN made recommendations indicating potential next steps required to develop a comprehensive business case and feasibility study. To make the issues tangible, CBN worked closely with Digital

Birmingham and the City Council's regeneration and planning team in generating ideas that can be implemented as pilot and demonstration projects.

Links:

Digital Birmingham <http://www.digitalbirmingham.co.uk/>

Community Broadband Network <http://www.broadband.coop/Projects/>

The 'market town' concept for the regeneration of the **Longbridge** car factory site is being developed in partnership with Openreach to ensure that NGA is built into the infrastructure and design from the outset to deliver FTTH as a market driven 'feature' rather than a post construction retro-fit. The project is supported by the RDA Advantage West Midlands.

A similar partnership arrangement is being formed for the development of the **Rotherwas** Industrial estate in Hereford where the Local Authority is leading on NGA facilitation by potentially utilising spare capacity on their existing council network to supply the backhaul to the network for the estate. The project is supported by the RDA Advantage West Midlands.

A company called Independent Fibre Networks Limited (IFNL) is providing fibre systems to local developers around the country. In Corby, some 6,000 homes are planned to be provided with FTTH.

Link: IFNL <http://www.ifnl.net/index.php>

EAST

Prior to its two local FTTC trials in **Muswell Hill**, London and **Whitchurch**, South Glamorgan, Openreach will run a technical trial in the **Foxhall** exchange area of Kesgrave, Suffolk in early 2009. Some 35 homes will be involved.

Link: Openreach announcement

<http://www.openreach.co.uk/orpg/news/productbriefings/nga/nga003.do>

The East of England Development Agency (EEDA) is discussing with a major supplier a possible NGA project based in King's Lynn/ **West Norfolk**.

On a more strategic level, the Agency is also working on the final details of what it hopes will be a ground breaking uplift scheme for next generation broadband across the region. Details should be made publicly available early in 2009.

Link: EEDA <http://www.eeda.org.uk/>

NORTH-WEST

Manchester's Digital Development Agency (MDDA) – a part of the city council - has contracted the Community Broadband Network (CBN) to look into the feasibility of creating a pilot NGA network as the first step in a wider deployment across the city. CBN was requested to look at business models that maximise community involvement and "stakeholding" in the evolving NGA network. The pilot will be a "*Living Lab*" experiment allowing lessons to be drawn on the potential for the technology for economic development and regeneration. In the Oxford Road corridor in central Manchester, there is to be a £500,000 investment by the North West Development Agency (NWDA). This investment was approved by NWDA investment committee in November 2008.

Link: Community Broadband Network <http://www.broadband.coop/Projects/>

In nearby **Salford Quays**, a huge project is underway called MediaCityUK and this will involve the deployment of next generation broadband to a range of small businesses on the site. The total project covers 200 acres of space in and around an established waterfront with space for the BBC and other major broadcasters, other big media corporations, and a myriad of smaller creative businesses. By 2010, the first stage is planned to be complete with the creation of 15,500 jobs.

Link: MediaCity UK <http://www.mediacityuk.co.uk/>

The **Cumbrian** parish of Alston is one of the most sparsely populated areas of England. When first generation broadband was being deployed by BT, it was unsurprisingly one of the areas initially deemed non-viable. This precipitated the creation of Cybermoor, among the first community-run broadband projects in the UK. Cybermoor is looking to maintain its pioneering position by investigating the opportunities for fibre-optic technologies. The Community Broadband Network (CBN) was commissioned to write a feasibility study, looking at the potential network architectures and business models that might support NGA on Alston Moor.

Link: Community Broadband Network <http://www.broadband.coop/Projects/>

In November 2008, Virgin Media announced a trial to provide 50Mbps to 200 houses in **Warrington**, Cheshire. These customers will receive the broadband package at no extra cost for two months.

YORKSHIRE

There is an ambitious NGA project in **South Yorkshire** called Digital Region. This project is supported by a partnership of Objective 1 (European Commission funding), Yorkshire Forward (the Regional Development Agency), Barnsley Metropolitan Borough Council, Doncaster Metropolitan Borough Council, Rotherham Metropolitan Borough Council and Sheffield City Council. Following a European Union procurement process, Thales Communication Services Ltd has been selected as the provider for the project which will use fibre to the cabinet (FTTC) to offer 25 Mbit/s+ to around 550,000 households and 40,000 businesses in the region. The Network Operating Centre (NOC) will be in Doncaster. Although the project has taken longer than expected, it will now be a three-year build programme commencing early in 2009 with the first services being offered in the second half of 2009. The network will use 12km of fibre, of which 700m will be new as the majority will be existing dark fibre or private circuits. The business case is based on 20% take-up, with the contract being a 10+5 years. Thales expect to see a return on investment by years 7-8.

Link: Digital Region <http://www.digitalregion.co.uk/index.html>

NYnet is a public and private sector commercial venture created in order to provide a communications network for **North Yorkshire** that is capable of delivering multiple high quality services to citizens, business and public sector bodies. The lead role is taken by North Yorkshire County Council with support from Yorkshire Forward and Government Office Yorkshire and Humber. The private sector technology partner is BT who will work with NYnet to deliver, monitor and maintain the network.

Link: NYnet <https://www.nynet.co.uk/>

NORTH-EAST

Gateshead Council has joined forces with Alcatel-Lucent Telecoms to provide high speed Internet access to one of its biggest employment sites, the **Baltic Business Quarter** development. This will be done through a joint venture company called

Gateshead Technology Innovations Ltd (G-ti). The project was announced in October 2008. Work has already started on the installation of miles of underground fibre optic cables right across the Baltic Business Quarter site and the system is expected to be up and running by early Spring 2009.

Link: Gateshead technology Innovation <http://www.g-ti.net/>

Durham County Council has asked the Community Broadband Network (CBN) to help them turn their grid for learning network/organisation into an open-access NGA platform. IT is still early days with this idea, but the core network already exists and the demographics of County Durham lends itself to NGA since, while the overall population density is low, people tend to live in small dense villages. As the core network for schools already has the kind of capacity needed for NGA and reaches many of these locations, the additional effort to reach homes and businesses may not be as much as one might think at first sight. It is hoped to evolve the project quite quickly with significant announcements during 2009.

SCOTLAND

Fibre firm H2O, which provides fast broadband via the sewers, has announced that it can provide a service faster and cheaper than traditional delivery methods. **Dundee** has been selected as the second such exercise. This Fibrecity project will connect every home (some 55,000), business and organisation in the city.

Link: H2O Dundee <http://www.h2o-networks.uk.net/news/?news=Dundee-to-become-the-first-Scottish-Fibrecit>

West Whitlawburn Housing Co-operative (WWHC) is a progressive housing charity on the outskirts of **Glasgow**. It is embarking on the **Cambuslang** project to build a further 100 new homes alongside their existing apartments, and is keen to offer the tenants the kinds of services being enjoyed by their counterparts on the continent. Having visited Nuenen and seen the impact that NGA is having on that community, WWHC has appointed the Community Broadband Network (CBN) to design and deliver a solution for their new homes with the aim of fitting it to the existing homes soon after the building work is complete. Early progress is expected with the first connections in February 2009 and it is possible that in a matter of months West Whitlawburn could have more fibre to the home (FTTH) connections than the BT scheme at Ebbsfleet.

Link: Community Broadband Network <http://www.broadband.coop/Projects/>

The **Angus Glens** are an area on the edge of the Highlands with limited access to telecommunications of any kind. The Community Broadband Network (CBN) is working with the community to find solutions to their needs with some additional help from C-Plan and Emtelle, both Scottish specialists in fibre-optic networks. It is hoped to have plans for their area which will deliver super-fast broadband to homes and businesses, bringing not just fast broadband and digital television but also eHealth. Some members of the community are already helping Dundee University to develop solutions for independent living and tele-medicine; the development of a reliable and fast community network will create a unique environment for taking these experiments to new levels.

Links:

Angus Glens <http://www.angusglens.co.uk/glensbroadband/broad.php>

Community Broadband Network <http://www.broadband.coop/Projects/>

Cardenden is an ex-mining town in Fife where the local social landlord is planning to install a combined heat and power system in the town and the Community Broadband Network (CBN) has been commissioned to help them overlay an open access fibre

network at the same time. This is an example of how the environmental agenda and the NGA agenda live very well together since, if the ground is being opened for one, the incremental cost of installing the other is quite small. The goal is to have fibre in the ground during 2009.

WALES

FibreSpeed is a £30M project to provide **North Wales** with a high-performance optical fibre network. It stretches more than 200 miles from Holyhead to Wrexham and on to the UK's fibre backbone in Manchester. After winning the competitive tender from the Welsh Assembly Government, Fibrespeed started construction in November 2007 for the first phase of the project. Geo, FibreSpeed's parent company, has been contracted as the prime contractor to build the network. The first part of the network is due to be on line in late 2008, while full service launch is expected in the first quarter of 2009. Financing for the project has come jointly from the European Regional Development Fund (ERDF), the Welsh Assembly Government and Geo Networks Ltd. The network was initially planned to connect 14 strategic business park locations in North Wales. However, overall the network could potentially expand to incorporate around 50 locations across Wales.

Link: Fibrespeed <http://www.fibrespeed.co.uk/en/index.html>

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Link: Openreach announcement

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NORTHERN IRELAND

The provision of NGA is being planned for the Titanic Quarter development in **Belfast**. Titanic Quarter is a £5 billion development co-promoted by the Port of Belfast and Titanic Quarter Limited. The NGA exercise is led by Redstone which is installing the fibre and Packetfront technology in all the homes and businesses in this new build regeneration project.

Link: <http://www.titanic-quarter.com/>

CONCLUSION

In his report for Government "The Next Phase Of Broadband UK", Francesco Caio recommended more local provision of next generation broadband and suggested that the Community Broadband (CBN), as a co-operative of many of those already in existence, should take the lead in establishing procedures and standards to make this work.

In response to this, CBN launched a 'National Framework for Local Action' at the Next Gen '08 conference in Manchester on 4 November 2008. This aims to bring together local initiatives to enable them to speak with one voice and co-operate in providing solutions to service providers, as well as creating a mechanism for establishing technical standards and modes of operation for local projects.

The number of local initiatives mentioned in this paper – almost 40 – is not necessarily a totally comprehensive review but will certainly surprise many. The various schemes are of very different sizes and at very different stages of development, but collectively they represent a range of funding and business models and of technical delivery options that should contribute significantly to the national debate on the timing and form of NGA roll-out in the UK.

The Communications Consumer Panel hopes that it has done a service in bringing together this most comprehensive review to date. We would welcome further information on any of the initiatives mentioned and on any schemes not covered by this review.

Communications Consumer Panel
20 January 2009