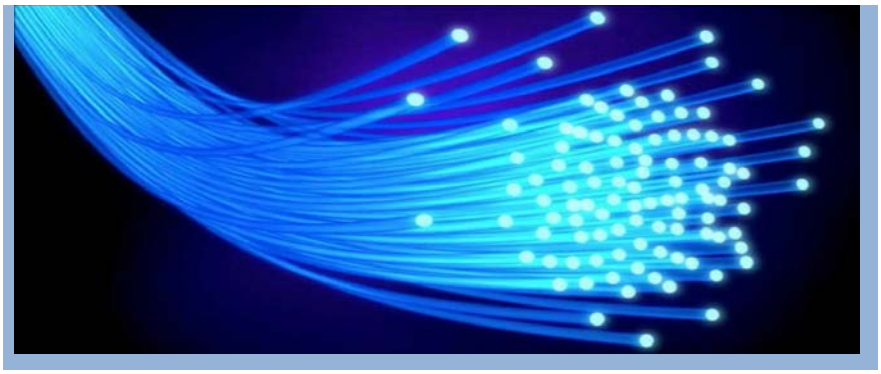
Broadband Connectivity

Practice Note | March 2018



BRISTOL CITY COUNCIL

Contents

1. Introduction 1
2. Background 1
2.1. What is *high-speed broadband*? 1
2.2. Broadband infrastructure networks present in Bristol 1
2.3. Why are broadband speeds important to planning? 1
2.4. Bristol's current connectivity and choice 2
2.5. Future-proofing Bristol's connectivity 2
3. Application of Policy BCS15 3
3.1. At the pre-application stage 3
3.2. At the application stage 4
3.3. Contacting broadband providers 4
3.4. Review and knowledge building 5

1. Introduction

Policy BCS15 of the adopted Bristol Core Strategy (June 2011) states that:

> **New homes and workplaces should include the provision of high-speed broadband access and enable provision of Next Generation broadband.**

This practice note explains how the requirements of policy BCS15 will be applied through the development management process to improve broadband connectivity to new development in Bristol.

2. Background

2.1. What is *high-speed broadband*?

Broadband technology is evolving all the time, including in the years since the Core Strategy was adopted. Next Generation Access, referred to by the Core Strategy, is no longer the current standard for high-speed broadband access. The current benchmark against which policy BCS15 should be applied is 'superfast broadband', defined by OFCOM as broadband with a download speed greater than 30 megabits per second (mbps).

2.2. Broadband infrastructure networks present in Bristol

There are currently two main providers of superfast broadband infrastructure in Bristol – Virgin Media and BT Openreach – and some newer entrants to the market. Some of these networks are 'proprietary', meaning used by one company only, whilst others are 'open networks', allowing other internet service providers (ISPs) to use their network to provide services to residents and businesses. The Virgin Media network is a proprietary network, whereas the BT Openreach network is an open network. Beyond this, City Fibre and The Bristol Network (B-Net Ultra) are developing their fibre broadband networks and offer services in parts of the city.

Although there has been a commercial roll-out of superfast broadband to large parts of Bristol by these providers, there remain areas of the city where superfast broadband infrastructure is not available.

2.3. Why are broadband speeds important to planning?

Poor broadband connectivity has implications for sustainable development.

Users with broadband speeds of below 10mbps experience a number of difficulties using the Internet, including problems with flexible home working, streaming, using cloud services, using the Internet at the same time as other occupants and very slow upload / download speeds.

As such, poor broadband speeds affect the liveability of homes and the viability and productivity of businesses, particularly small and start-up businesses. In doing so, poor broadband speeds act as a constraint on the city's economy. Poor broadband speeds also reduce the potential for residents to work from home, increasing the need for daily travel to work.

Broadband infrastructure is costly to retrofit and may not be provided if it is not taken into account at the stage a development is being designed and built.

2.4. Bristol's current connectivity and choice

Commercial roll-outs of superfast broadband have reached the majority of the city's businesses and residential premises, however it has resulted in a patchwork of provision with some areas enjoying availability and choice and other areas / developments left with no provision.

Telecommunications cabinets in large part of the city were upgraded as part of the commercial roll-out of the BT Openreach superfast fibre broadband network in 2012/3. However, a significant minority of cabinets were not included as they were deemed to be uneconomic or due to other constraints, e.g. difficulty siting a new cabinet. Virgin Media, meanwhile, has a wide footprint in the city, in part from its origins as a residential cable TV provider, but some city centre areas, new build areas and business parks lack access to its network.

Areas of Bristol that currently have poor broadband connectivity include:

- Some parts of central Bristol
- Business parks and trading estates
- Parts of Hengrove, Whitchurch and Stockwood, due to the local telecoms exchange not being fibre enabled
- New build areas connected to a BT Openreach cabinet which has not been upgraded to fibre and where there is no alternative choice of broadband provider
- Developments / areas connected direct to a BT telephone exchange where there is currently no superfast offer and no alternative choice of broadband provider

These are areas where development proposals may face greater challenges to provide superfast broadband connectivity.

2.5. Future-proofing Bristol's connectivity

Where fibre broadband has been delivered to date, it has tended to be delivered through hybrid fibre networks (fibre to the street cabinet and then copper, or coaxial, cables to the home/premises). This limits potential performance compared to a full fibre connection (fibre direct to the home/premises).

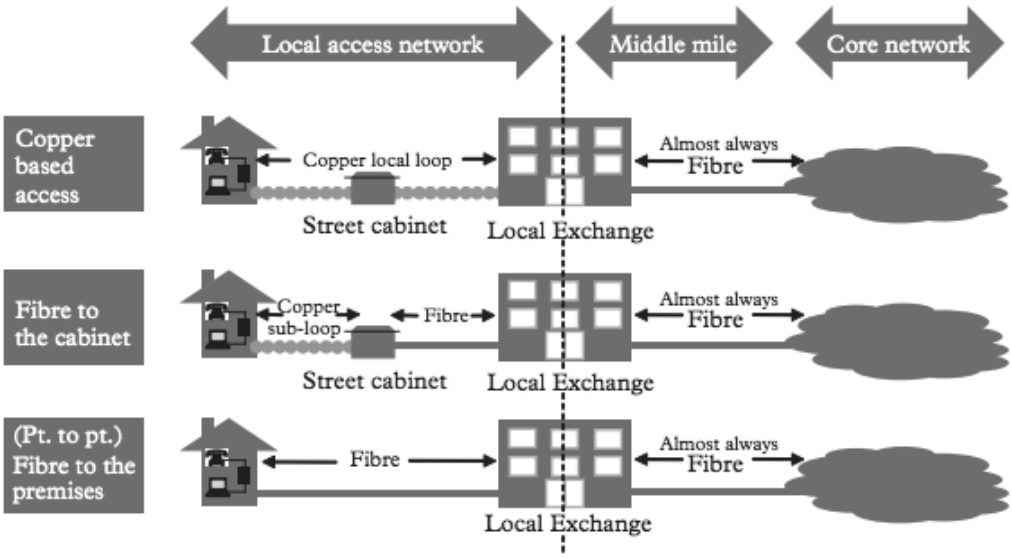


Fig.1: Types of broadband access

Full fibre connections represent the most future-proof form of infrastructure. New development should look to increase the spread of full fibre connections, which have the potential to boost the city's economy; help businesses grow and be more productive; help Bristol compete with other cities and provide more symmetrical upload / download speeds for residents and businesses. Full fibre connections also offer greater reliability and lower energy / maintenance costs.

The council let a concession in 2015 to The Bristol Network to use the council's own 140km duct network, known as B-Net, to lay fibre and offer services to customers. They are now offering full fibre services, initially to businesses, in parts of the city. Meanwhile, City Fibre acquired the K-Com network in Bristol and is currently expanding its infrastructure in the city and offering full fibre services.

Where possible, it would be preferable for new developments (including the conversion of existing premises) to provide a choice of broadband infrastructure so occupiers have a choice of superfast (or greater) broadband packages at a range of prices. Competition and choice in the Bristol broadband market from competing infrastructure providers will drive future the availability of full fibre broadband in the city.

3. Application of Policy BCS15

The requirements of policy BCS15 will be applied to for major development of at least 10 homes (including the conversion of existing buildings to new homes, where planning permission is required) or 1,000m² of non-residential floorspace.

3.1. At the pre-application stage

Broadband connectivity is most helpfully and effectively raised at the earliest possible stage of the planning process. This can help to ensure that the need to provide superfast broadband connectivity is taken into account in prospective applicants' layout planning and costings before proposals reach the planning application stage.

At the pre-application stage, prospective applicants:

- Will be reminded of the requirements of policy BCS15 concerning broadband connectivity, i.e. the provision of superfast broadband connectivity;
- Will be advised that occupiers of the proposed development should be able to arrange access to superfast broadband immediately at the point of occupation;
- Will be encouraged to liaise with broadband providers at an early stage to identify whether the proposed development could be connected to existing infrastructure or whether additional infrastructure would be required, and how this would be provided.

Prospective applicants can obtain connectivity assessments, often free of charge, from broadband infrastructure providers and such proof will be required at the application stage.

For larger developments of 30 or more new homes, the council will also remind developers of the aspiration set out in this practice note for full fibre technology and the benefits to future occupiers. Although this is not currently a requirement of policy BCS15, this is the level at which some providers will consider providing full fibre solutions free-of-charge to the developer, if given sufficient notice.

3.2. At the application stage

To comply with policy BCS15:

- Applications for planning permission for major development should be accompanied by evidence of the superfast broadband connectivity of the site. This should take the form of a connectivity assessment, or similar proof, from one or more broadband infrastructure providers evidencing the availability of at least superfast broadband speeds (see section 3.3 below). This can be submitted as part of a sustainability statement accompanying the application.
- Where superfast broadband connectivity is available, the development should include the infrastructure to connect to this service and make it available to occupiers.
- Where superfast broadband connectivity is not currently available:
    - Applications should be accompanied by evidence that discussions have been held with a range of providers to upgrade infrastructure to deliver superfast broadband or, for developments of 30 or more homes, full fibre connections.
    - Where one or more providers have agreed to provide superfast broadband connectivity, the development should be designed to connect to this service and make it available to occupiers.
    - Where no provider has agreed to provide superfast broadband connectivity, the development should incorporate additional dedicated telecommunications ducting to enable the provision of superfast broadband in future.

3.3. Contacting broadband providers

Free connectivity assessments are available from most broadband providers which will show expected speeds at the development.

Superfast broadband connectivity is often available from broadband providers free of charge for development over a certain scale, provided that sufficient notice is given, typically at least 12 months prior to first occupation. In some cases, providers may request a contribution from the developer.

Developers are recommended to visit the following websites for confirming the availability of superfast broadband or discussing full fibre for a 30+ development.

BT Openreach - https://www.ournetwork.openreach.co.uk/

Virgin Media - http://www.virginmedia.com/lightning/network-expansion/property-developers

Hyperoptic - https://www.hyperoptic.com/property/

City Fibre - https://www.cityfibre.com/business/

The Bristol Network - http://www.thebristolnetwork.com/

Provided they have sufficient notice, telecoms providers will typically cover the cost of fibre to the premises (FTTP) for developments of 30+ homes. Telecoms providers have dedicated teams to help developers achieve FTTP.

This is not an exhaustive list of broadband providers in the city.

3.4. Review and knowledge building

This practice note will be kept under review to ensure that the implementation of policy BCS15 remains up-to-date.