Department for Culture Media & Sport

SUPERFAST BRITAIN

New build homes: superfast broadband connectivity options

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Introduction from Ed Vaizey

Demand for superfast broadband, defined as download speeds of 24 megabits per second, is growing rapidly and home buyers are increasingly looking for access as an essential part of their new home.

Access to broadband is increasingly expected by consumers – and is central to a comfortable, modern living experience. Activities like being able to browse social media, shop online, work from home, watch catch-up television, or research homework online are taken for granted.

Small developers are an important contributor to housing supply, and will play a key role in helping meet the Government's housing supply ambitions. It is vital that these new homes meet the digital connectivity needs of their future occupants – superfast broadband as standard.

The Prime Minister has likened broadband to the other utilities such as water and electricity that home owners take for granted in their properties. The Government made a manifesto pledge that at least 95% of all UK homes will have access to superfast broadband by the end of 2017.

It is important that new home owners get what they need. That is why Openreach and the Home Builders Federation have come together to set out for the first time a clear superfast offer to the new homes market, with the support of Government. This sets a high bar for all telecoms providers and developers.

This brochure has been developed in partnership with the Home Builders Federation. It is here to encourage small developers to think about their customer's connectivity needs early on in the development process and plan ahead for superfast broadband installation. It also provides advice on how to find out what coverage options are available on your proposed site.

The UK is undergoing a transformation of broadband infrastructure, and coverage is expanding all the time. But in limited cases such as hard to reach locations (less than 5% of premises) installing superfast broadband can be extremely expensive. Knowing this early on helps you manage customer expectations. You may also be able to help them find alternatives.

Thank you for taking the time to read this guidance – and for your commitment to build new homes fit for the digital century. We hope you find it a useful resource.

Minister of State for Culture and the Digital Economy

Establishing broadband connectivity options in your area

Key points

- The Go Superfast postcode checker is the best initial tool for checking coverage in your area.
- The relevant Local Authority will always be the best source of broadband availability for your housing development.
- This brochure includes an indicative list of major suppliers and alternative suppliers and a list of different broadband technologies available in the market.

Summary

To find the coverage available in your area, the best UK-wide tool is the government's Go Superfast postcode checker, which can be found at the following link: https://www.gov.uk/gosuperfast.

The information in the postcode checker includes the latest information from Local Authorities as to broadband availability in their area, including the BDUK Phase 1 and Phase 2 superfast rollout programmes, which are due to take superfast coverage to 95% of UK premises by the end of 2017.

The postcode checker also contains links to the relevant Local Authority broadband rollout webpages. The relevant Local Authority will always be the best source of information for broadband availability for your property development, including in situations where you do not yet have a postcode.

By way of background, listed below are some of the technology options for broadband connectivity and some of the supplier options. Please note that this overview is not intended to be comprehensive, and we will review annually to make any updates required.

Technology and supplier options

Key points

- There are six major technologies that can deliver superfast speeds:
    - Fixed line broadband, which includes:
        - Fibre to the cabinet (FTTC)
        - Cable (hybrid fibre coaxial)
        - Fibre to the premises (FTTP)
    - Fixed wireless
    - Satellite
    - Mobile broadband
- Some suppliers use a number of these technologies, and some mix technologies in their infrastructure in order to lower deployment costs.
- While satellite and mobile broadband have the greatest coverage of the UK, they tend to be more expensive for the consumer at any given data usage limit than the other technologies.
- Openreach and Virgin Media have by far the largest number of customers in the UK, and the greatest coverage bar satellite suppliers. However, there are a large and growing number of alternative suppliers both in cities and in rural areas that can provide superfast broadband services.

Fixed line broadband:

- **Fibre to the Cabinet (FTTC):** This is the most widely available form of superfast broadband infrastructure in the UK, which uses the existing copper telephone network. Fibre is installed to a nearby telephone cabinet, connecting the remaining distance to each premises with the existing copper line.
- **Cable (hybrid fibre coaxial)**: This is another prevalent form of superfast broadband infrastructure in the UK, where fibre is installed to a nearby cabinet and then segments of a coaxial copper network connect premises in the vicinity

- **Fibre to the Premises (FTTP):** This is where optical fibre is run from the exchange all the way through to the premises, allowing for a very quick and fully future proofed internet connection. Speeds offered over FTTP are far above the national average - typically up to 1gbps - and very high upload speeds are also offered, which is particularly useful for businesses or those working from home.

Openreach

Openreach has the largest fibre broadband infrastructure footprint covering 83% of total UK premises (more than 24m premises), covering urban, suburban and rural areas. Openreach is helping the Government deliver superfast broadband to 95% of the UK by 2017. Openreach has also committed to deliver ultrafast speeds to 10 million homes and businesses by the end of 2020 and to the majority of the UK within a decade. They have launched a specific offer for new housing developers, launched in February 2016. Openreach has also established a Community Fibre Partnership programme, where local groups can club together to jointly fund additional costs in getting Fibre Broadband Infrastructure in hard to reach areas, lowering the cost per premise.

http://www.newdevelopments-openreach.co.uk, http://www.superfast-openreach.co.uk/, http://www.openreach.co.uk/communityfibre

Virgin Media

The second largest broadband operator in the UK, Virgin Media are expanding from their current footprint of around 45% of the UK (12.6 million premises) to cover 60% of the UK (17 million premises) by 2020. They currently have more of a presence in cities and suburban areas than in rural areas. Virgin Media offer an ultrafast broadband Cable service of up to 200Mbps (residential) and up to 300Mbps (business).

www.virginmedia.com

GTC

GTC is a specialist independent provider of utility infrastructure serving the UK new build sector, providing an Open Access Fibre to the Premise (FTTP) telecoms infrastructure to both low density and high rise new build developments across the UK. They offer 300Mbps services to homes and 1Gbps services to businesses. They are currently contracted to deliver fixed line phone and broadband to many thousands of new homes in England, Scotland and Wales.

www.gtc-uk.co.uk

KCom

Extensive network in Kingston upon Hull and East Riding of Yorkshire, which will continue to grow up to 2020. Primarily Fibre to the Premises, with some Fibre to the Cabinet.

http://www.kc.co.uk/

CityFibre

Specialist provider of fibre to the premises ultrafast broadband in cities. CityFibre currently have a presence in 36 UK cities, but their FTTP network is predominantly limited to York currently. CityFibre plan for this to grow to 50 cities by 2020 and to cover 20% of the UK's premises.

http://www.cityfibre.com/

Hyperoptic

Supplier of fibre to the premises ultrafast broadband, with a presence in a growing number of UK cities.

https://hyperoptic.com/

Gigaclear

Supplier of fibre to the premises ultrafast broadband in rural areas. Currently operate in 25 rural villages in the UK, with another 50 in the process of installation (http://www.gigaclear.com/discover-gigaclear/where-we-are/). They also have a page where communities expressing sufficient demand can register to see if Gigaclear could deploy in their area.

http://www.gigaclear.com/

Fixed Wireless Broadband:

Fixed wireless broadband is a way of achieving connectivity in premises without the need for a physical (wired) connection. A small dish is attached to the side of the property, which can be paid for outright by the developer or rented by the consumer, and then links into a local transmitter which is connected to the fibre network spine. This can achieve very high speeds of up to 50-60Mbps.

ISP Review have published the following list of fixed wireless suppliers, including speeds offered and areas covered: http://www.ispreview.co.uk/isp_list/ISP_List_Wireless.php

Satellite Broadband:

Satellite broadband is a way of achieving connectivity in premises, without the need for a physical (wired) connection. A satellite dish is installed onto the property, which can be paid for outright by the developer or rented by the consumer. A satellite internet package can then be bought by the consumer. There are no geographical limits on satellite broadband availability, but some considerations would need to be taken into account when developing the property to ensure that the satellite dish would not, for example, be under tree cover. One additional consideration to be aware of is that at any given data limit per month, satellite packages tend to currently be more expensive for consumers than fibre or fixed wireless packages.

ISP Review have published the following list of satellite providers:
http://www.ispreview.co.uk/isp_list/ISP_List_Satellite.php

Alternatives:

There are now around 40 alternative broadband suppliers in the market, with around 30% operating in urban areas and 70% in rural areas. These alterative providers use the full range of technologies set out above. A full list of alternative suppliers by geographic area can be found at Annex D of the following Ofcom report: http://stakeholders.ofcom.org.uk/binaries/research/infrastructure/2014/next-gen.pdf

Mobile Broadband:

The four mobile network operators (Vodafone, EE, Three, and O2) provide widespread coverage of mobile broadband through their 4G and 3G networks. This does not require a physical (wired) connection. Consumers purchase a "dongle" that plugs into their computer or sign up for tablet services direct, and have access to the mobile network of their choosing. Ofcom provide postcode level data on service availability from each of the four mobile network operators. 4G is due to be available to 98% of UK premises by the end of 2017. One consideration to be aware of is that at any given data limit per month, mobile packages currently tend to be more expensive for consumers than fibre or fixed wireless packages.

See publicly available resources at: http://www.uswitch.com/broadband/mobile_broadband/ and http://www.ofcom.org.uk/mobile-coverage