Connected Nations Update

Summer 2020

Connected Nations Update: Summer 2020 – Welsh available

REPORT:

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1. Overview

This is the second interim update to our December 2019 annual Connected Nations report. It is based on mobile coverage and fixed broadband availability across the UK as of May 2020, when the UK was in the midst of the coronavirus outbreak.

In our full report at the end of the year, we shall be reporting on the effects of the pandemic on the UK's telecommunications infrastructure and how consumer demand changed over this period. For example, home broadband use and mobile calls traffic have both seen significant increases as a result of changing working practices, whereas mobile data use has fallen as people use their home Wi-Fi to access content on their smartphones.

Key Findings

Full fibre broadband has increased significantly to over 4.2 million homes (14%), up from 3.5 million (12%) since our last update.

Superfast and ultrafast broadband coverage continues to expand across the UK, although to a lesser extent, rising by approximately 100,000 and 500,000 properties respectively.

Mobile coverage remains stable but mobile operators have now started rolling out coverage to new areas through the **Shared Rural Network** scheme, agreed with the UK Government earlier this year. As a result, nationwide coverage is set to increase in the coming years.

In addition to this report, we are publishing a dashboard and an interactive chart that has both the latest and historical data.

The data from this update has also been used to refresh our coverage checker site and app.

Key findings – Fixed Broadband

Full Fibre[1] **broadband**: availability of full fibre broadband in the UK continues to improve at a rapid pace, with over 4.2 million homes[2] (14%) now able to access faster, more reliable full fibre services, an increase of 670,000 (two percentage points) since January. This is a result of increased rollout both from the expansion of existing broadband networks as well as the inclusion in our analysis of companies building entirely new fibre networks.

Ultrafast broadband (download speeds of at least 300 Mbit/s[3]): availability of ultrafast broadband has increased across the UK by just under 500,000 properties since our spring Update, to 16.6 million homes (57%). This has been driven predominantly by increases in the availability of both Virgin Media's cable network and full fibre deployments. In some, predominantly urban areas, new

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[1] We consider a property to have "full fibre coverage" only if: 1. fibre is deployed in close proximity to the premises, so only a dedicated fibre connection to the property is necessary to provide full (end to end) fibre connectivity, and 2.the end user would expect to pay only a published pre-agreed connection charge, if one was to be imposed

[2] Note that we report on residential properties (homes) for full fibre, ultrafast and superfast coverage, but report on both residential and commercial properties for 'decent' broadband

[3] Ultrafast broadband can be delivered through a variety of technologies such as G.Fast, DOCSIS (Cable) and full fibre.

fibre networks are being deployed in areas with existing ultrafast coverage, and hence the increases in full fibre availability do not necessarily result in a corresponding increase of ultrafast coverage.

Superfast broadband (download speeds of at least 30 Mbit/s): superfast broadband continues to be rolled out across the UK, with an additional 100,000 properties covered since our last report. This means a total of 27.8 million homes (95%) can now access superfast broadband.

Decent broadband (10Mbit/s download and 1Mbit/s upload speed): the vast majority of UK properties can now access decent broadband. The number of properties (both residential and commercial) that cannot receive a 'decent' broadband service from a fixed line stands at 590,000 (2%), broadly similar to the 608,000 reported in April. These properties may be eligible for the broadband universal service, which gives properties unable to get a decent connection the legal right to request one.

As noted in our report in December, we expect that the growing availability of Fixed Wireless Access (FWA) will further reduce the number of premises unable to get a decent broadband connection. At that time, we estimated that the number of properties unable to get decent broadband, even with the inclusion of FWA networks, was around 189,000. We aim to address the coverage of current FWA deployments in more detail in our full report at the end of the year.

The above figures show the availability of these services, but we are aware not all homes take-up the fastest available service in their area. We will report on take-up in detail in our annual Connected Nations report in December.

Developments supporting investment in broadband networks

In July Ofcom published a consultation aimed at promoting competition and investment in fibre networks, taking into consideration BT's commitment to deploy a fibre network to at least 3.2million in rural areas by 2025/26 as part of a larger plan to build to 20 million premises across the UK by the mid to late 2020s.[4]

UK: The UK Government has announced that almost 500,000 premises across the UK have been connected to gigabit-capable broadband since summer 2018 as a result of a £1 billion government funding commitment that runs until the end of 2021, with a further £5 billion earmarked for the hardest-to-reach areas. The UK Government has also launched a new taskforce – the Gigabit Take-Up Advisory Group (GigaTAG) – to encourage further take-up of gigabit broadband services.[5]

Scotland: The Scottish Government has committed around £600m to its 'Reaching 100%' superfast broadband programme, which aims to bring speeds of 30 Mbit/s to every premise in Scotland. This will involve upgrading around 180,000 premises in Scotland that are currently unable to achieve superfast speeds. In addition, the Scottish Government announced earlier this year that all of the planned R100 build in the south of Scotland and the vast majority of the R100 build in central Scotland will now use full-fibre (or fibre-to-the-premises) technology.

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[4] https://www.ofcom.org.uk/consultations-and-statements/category-2/bt-commitment-area-3-fibre-network

[5] https://www.gov.uk/government/news/gigabit-broadband-rollout-milestone-reached

In August, the Scottish Government also announced that a new Scottish Broadband Voucher Scheme would be launched in September 2020. This will provide grants to people and businesses and offer financial support to ensure they can access superfast speeds of at least 30 Mbit/s. Premises not covered by either the main 'Reaching 100%' (R100) programme or commercial deployment will be eligible for the scheme. People are able to check eligibility for these schemes via its new online checker tool.[6]

Wales: In July the Welsh Government announced that it had agreement with Openreach to increase the number of premises addressed as part of 'Superfast Cymru' from 26,000 to 39,000, as part of a package of measures to reach the remaining premises in Wales that cannot get superfast broadband. The extension will be funded by £30m from the Welsh Government and European Union, with additional investment from Openreach.

Northern Ireland: In Northern Ireland, Project Stratum is reported as being at an advanced stage of procurement. This project aims to improve broadband connectivity in the Province by extending Next Generation Access (NGA) broadband infrastructure to approximately 79,000 premises. Following the evaluation of bids over the summer period, contract award is anticipated in mid-October 2020.[7]

Key findings – Mobile

We measure mobile coverage in a way that reflects the likely experience of people using their mobile phones.[8] There has not been a significant increase in coverage since our last report, but we expect the Shared Rural Network, agreed between the UK Government and industry earlier this year to drive forward coverage improvements over the coming years.

4G: Coverage of 4G mobile networks across the UK has not seen significant changes over the last reporting periods. Two thirds of the UK landmass has good 4G coverage from all four operators, and this area includes 97% of the premises in the UK.

4G not-spots: Both geographic and road not-spots (that is, areas where good 4G services are not available from any mobile operator) remain at 9% and 5% respectively, although the picture in individual nations varies significantly particularly in Scotland and Wales.

Calls and text coverage: As with 4G, coverage remains largely unchanged over the previous reporting periods. 80% of the UK landmass is covered by all operators for calls and text services and this area includes 99% of premises in the UK.

Calls/text not-spots: Areas where people are unable to make a call or send a text from any operator (not-spots) is similarly unchanged, with UK geographic not-spots at around 5% and not-spots on the UK's roads at around 2%. However, as with 4G, there are marked variations for individual nations; for example, geographic not-spots across Scotland remains higher than the rest of the UK (at around 12% compared with 5% for the UK as a whole).

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[6] https://www.scotlandsuperfast.com/

[7] https://www.economy-ni.gov.uk/topics/telecoms/project-stratum

[8] Details on definitions can be found in the associated methodology annex of the December 2019 report: https://www.ofcom.org.uk/__data/assets/pdf_file/0021/186411/connected-nations-2019-methodology.pdf

5G: We are in the early stages of 5G rollout, so we will not be reporting on 5G coverage in this update. We continue to work with mobile network operators to establish how best to evaluate and report on 5G coverage.

Developments supporting investment and coverage

At the end of August, Ofcom completed the 700 MHz clearance programme. Following the project's completion, we will release more airwaves in an upcoming auction, with bidding set to start in January 2021, and spectrum being available to be used immediately after the auction[9]. This means mobile companies will be able to use it to improve mobile services to customers and give people better access to 5G.

Our new local area licences are also supporting more localised mobile coverage projects, including the Ch4lke Mobile project, which, supported by more than £2m in Government funding, has recently announced new connectivity for Bowerchalke, a village of more than 400 people.[10]

In July 2020, we also announced that we are increasing the amount of spectrum available for Wi-Fi and other wireless technologies, to meet the growing demand for faster and more reliable Wi-Fi to support everyday activities and new applications.[11]

The Scottish Government has also committed £25 million towards the 'Scottish 4G Infill' (SG4i) Programme, which aims to help build new mobile network masts in rural locations with no existing 4G coverage. This is separate from, and in addition to, the wider UK Shared Rural Network agreement mentioned above. A progress update was provided in July this year, which confirmed that 36 'not-spot' sites were either at pre-build or build stage.[12]

Data collection and reporting

We continue to increase the number of operators from whom we collect coverage data to improve the accuracy of the data we publish. We also continue to gather coverage data on a 4-monthly basis and usage information each year. In addition to our regular reporting, in the full report at the end of the year, we also intend to publish information about the impact of Covid-19 on the UK's telecoms sector.

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[9] https://www.ofcom.org.uk/about-ofcom/latest/media/media-releases/2020/plans-for-spectrum-auction

[10] https://ch4lke.co.uk/

[11] https://www.ofcom.org.uk/consultations-and-statements/category-2/improving-spectrum-access-for-wi-fi

[12] https://www.gov.scot/publications/scottish-4g-infill-programme-progress-update/

2. Dashboards

Fixed broadband

Access to full fibre services	September 2019	January 2020	May 2020
UK	10%	12%	14%
England	10%	11%	13%
Northern Ireland	31%	41%	49%
Scotland	8%	10%	13%
Wales	12%	13%	15%

Access to Ultrafast services	September 2019	January 2020	May 2020
UK	53%	55%	57%
England	55%	58%	59%
Northern Ireland	49%	52%	57%
Scotland	45%	48%	50%
Wales	31%	33%	34%

Access to Superfast services	September 2019	January 2020	May 2020
UK	95%	95%	95%
England	95%	96%	96%
Northern Ireland	89%	89%	89%
Scotland	92%	93%	93%
Wales	93%	93%	94%

Access to 10Mbit/s services	September 2019	January 2020	May 2020
UK	98%	98%	98%
England	99%	99%	99%
Northern Ireland	94%	94%	94%
Scotland	97%	97%	97%
Wales	97%	97%	97%

Unable to receive 10Mbit/s downstream and 1Mbit/s upstream (potentially USO eligibile)	September 2019	January 2020	May 2020
UK	2%	2%	2%
England	2%	2%	2%
Northern Ireland	6%	6%	6%
Scotland	4%	3%	3%
Wales	3%	4%	3%

Note 1: We consider a property to have "full fibre coverage" only if: 1. fibre is deployed in close proximity to the premises, so only a dedicated fibre connection to the property is necessary to provide full (end to end) fibre

connectivity, and 2.the end user would expect to pay only a published pre-agreed connection charge, if one was to be imposed.

Note 2: This may exclude broadband services available from some smaller providers.

Note 3: Figures for potential USO eligibility are for all (both residential and commercial) properties. Figures for other speeds refer to residential properties only.

Note 4: Potential USO eligibility figure for Wales increased by 0.3% between Sept 2019 and Jan 2020, but due to rounding is reported higher. The increase is due to new premises being identified, for which the expected broadband speed for some is below the USO threshold or missing, and improved, but lower, copper speed estimates and upgraded FTTP coverage modelling from Openreach. These effects may also be evident in figures at more granular levels such as Local Authorities or postcodes.

4G coverage

Premises (outdoor) covered by all operators	September 2019	January 2020	May 2020
UK	97%	97%	97%
England	98%	98%	98%
Northern Ireland	92%	92%	93%
Scotland	96%	96%	96%
Wales	93%	93%	93%

Geographic area covered by all operators	September 2019	January 2020	May 2020
UK	66%	67%	67%
England	81%	82%	82%
Northern Ireland	75%	75%	77%
Scotland	42%	43%	43%
Wales	58%	58%	58%

Geographic area not covered by any operator	September 2019	January 2020	May 2020
UK	9%	9%	9%
England	3%	3%	3%
Northern Ireland	3%	3%	3%
Scotland	20%	20%	20%
Wales	11%	11%	10%

Coverage of all roads by all operators	September 2019	January 2020	May 2020
UK	56%	56%	57%
England	62%	63%	64%
Northern Ireland	42%	42%	46%
Scotland	43%	44%	44%
Wales	45%	45%	46%

All roads not covered by any operator	September 2019	January 2020	May 2020
UK	5%	5%	5%
England	3%	3%	3%
Northern Ireland	7%	7%	7%
Scotland	9%	9%	9%
Wales *(Note 3)*	11%	11%	10%

Note 1: Thresholds for 4G services: 4G (-105 dBm). This relates to nearly all connections being capable of delivering a connection speed of at least 2Mbit/s and reliable voice calls.

Note 2: As we noted in the annual report in December, coverage data includes predictions provided to us by EE using a newly developed coverage prediction model, which has seen some changes in the coverage it predicts for landmass and premises. This also applies to voice and text services in the dashboard below.

Note 3: Published figure for January 2020 in Spring update was 10%, but a recalculation has made a 0.07percentage point change, which due to rounding, is now presented as 11%.

Voice and text coverage

Premises (outdoor) covered by all operators	September 2019	January 2020	May 2020
UK	99%	99%	99%
England	99%	99%	99%
Northern Ireland	97%	97%	97%
Scotland	98%	98%	98%
Wales	98%	98%	98%

Geographic area covered by all operators	September 2019	January 2020	May 2020
UK	79%	79%	80%
England	91%	91%	92%
Northern Ireland	86%	86%	87%
Scotland	58%	59%	59%
Wales	77%	78%	78%

Geographic area not covered by any operator	September 2019	January 2020	May 2020
UK	5%	5%	5%
England	1%	1%	1%
Northern Ireland	1%	1%	1%
Scotland	12%	12%	12%
Wales	5%	5%	5%

Coverage of all roads by all operators	September 2019	January 2020	May 2020
UK	76%	76%	77%
England	82%	83%	83%
Northern Ireland	62%	62%	64%
Scotland	62%	63%	63%
Wales	70%	70%	70%

All roads not covered by any operator	September 2019	January 2020	May 2020
UK	2%	2%	2%
England	1%	1%	1%
Northern Ireland	3%	3%	3%
Scotland	4%	4%	4%
Wales	5%	5%	5%

Thresholds for voice and text are: 2G (-81 dBm), 3G (-100 dBm), 4G (-105 dBm).