Connected Nations Update

Summer 2021

Connected Nations Update: Summer 2021 – Welsh available

REPORT:

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1. Overview

This is the second interim update to our December 2020 annual Connected Nations report. It is based on mobile coverage and fixed broadband availability across the UK as of May 2021.

Key Findings

Number of homes able to get gigabit capable broadband is up to over 11.6 million homes (40% of all UK homes), up from 10.8 million (37%) since our last update.

Full fibre coverage continues to increase at pace, up to 24% from 21% in the four months between January 2021 and May 2021 an increase of 3 percentage points (ppt), with just under seven million homes now covered.

Superfast and ultrafast broadband coverage continues to grow across the UK, albeit slowly, with superfast broadband coverage remaining at 96%, but ultrafast broadband rising to 62% (from 61% in January 2021).

Mobile coverage remains stable as plans develop to start rolling out coverage to new areas through the **Shared Rural Network** scheme, agreed with the UK Government in 2020. In addition, the Scottish 4G infill programme continues to address 'not-spots' and a Scottish Broadband Voucher scheme provides further support. As a result, nationwide coverage is set to increase in the coming years.

As with previous updates we are publishing a dashboard and an interactive chart alongside this report that has both the latest and historical data.

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

Key findings – Fixed Broadband

Gigabit capable broadband: availability of broadband capable of delivering Gigabit[1] speeds for consumers continues to improve at a rapid pace, with nearly 11.6 million UK homes[2] (40%) now able to access these faster services, up from 10.8 million homes (37%) in January 2021. This has been largely driven by the rollout of FTTP with some increases from the Virgin Media O2 DOCSISI3.1 upgrade programme.

Full fibre deployment: Nearly a quarter (24%) of homes have access to full-fibre services. Full fibre coverage is now at 6.9 million, up from 5.9 million (21%) reported in our Connected Nations Spring Update. This is driven predominantly through deployments by the larger fibre infrastructure operators but supported by an increasing number of smaller providers across the UK serving individual communities and regions.

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[1] Gigabit capable networks include full fibre networks as well as any network that is able to offer at least 1Gbit/s download speeds (such as the latest version of cable network technology – DOCSIS 3.1)

[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

Ultrafast broadband (download speeds of at least 300 Mbit/s[3]): availability of ultrafast broadband has increased across the UK by over half a million homes to 18.2 million homes (62%). This has been driven predominantly by deployments by Openreach and other full fibre operators as well as Virgin Media. In some, predominantly urban areas, new fibre networks and gigabit capable networks are being deployed in areas that have existing ultrafast coverage, and hence the increases in full fibre availability and gigabit capable networks does not necessarily result in a corresponding increase of ultrafast coverage.

Superfast broadband (download speeds of at least 30 Mbit/s): as networks focus on rolling out new full fibre and other gigabit capable connections, superfast broadband roll out across the UK has slowed, although coverage remains at 96% of homes.

Decent broadband (10 Mbit/s download and 1 Mbit/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 largely unchanged at around 650,000 (remaining at just over 2%).

Broadband services are also available from Fixed Wireless Access (FWA) networks, provided via mobile networks or through Wireless Internet Service Providers (WISPs). If managed well, FWA networks can deliver a decent broadband service, and can be used as an alternative network technology where consumers do not have access to a decent broadband connection on a fixed network. Since the annual Connected Nations report in December, we have gathered data from a greater number of WISPs. Based on the coverage reported by these providers, we now estimate 6% of premises have coverage from a WISP that is capable of providing a decent broadband service (up from 5%). FWA coverage from mobile networks capable of providing decent broadband is available to 93% of premises.

Factoring in the coverage estimates provided by FWA providers, we estimate that there remain 134,000 premises that do not have access to a decent broadband service from a fixed network or an FWA network. This has fallen from our estimate of 189,000 in December 2020.[4]

Of these 134,000, they will be eligible for the USO if they not are expected to be covered by rollout by publicly funded schemes within the next twelve months, and where further analysis by BT does not show it can already connect these from its existing network.[5] As such, we expect the number of premises eligible for the USO may be lower than this figure.

The above figures show the availability of broadband services across the UK; we shall report on take-up of broadband services in more detail in our annual Connected Nations report in December 2021.

[3] Ultrafast broadband can be delivered through a variety of technologies such as G.Fast, DOCSIS (Cable) and full fibre.
[4] Due to updates in address databases used, Ofcom has been able to identify additional premises within the reported FWA coverage areas. This has resulted in a drop in the reported premises which do not receive a decent broadband service as defined by the USO.
[5] In order to support the broadband Universal Service Obligation (USO), we provide data to BT on the premises that are potentially eligible for the USO. Based on the December 2020 figures, we provided details on the 189,000 premises not planned to be covered by publicly funded rollout. On further analysis by BT, it found it was able to connect to just under 100,000 of these premises. We are working with BT to ensure its data submissions for Connected Nations help identify such premises in future.

Key findings – Mobile

We measure mobile coverage in a way that reflects the likely experience of people using their mobile phones[6] 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 in 2020, 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. Around 92% of the UK landmass has good 4G coverage from at least one operator, and this area includes nearly all of the premises in the UK. This is expected to rise to 95% by end of 2026 as a result of the SRN. Coverage for both Scotland and Wales is significantly lower. It should be noted that individual MNOs are committed to achieving between 85% and 88% coverage in Wales by 2027[7] under the government's SRN investment, and between 82% and 85% in Scotland.

4G not-spots: Both geographic and road not-spots (that is, areas where good 4G services are not available from any mobile operator) have fallen slightly. Geographic not-spots have fallen to 8% from 9%. Road coverage remains largely the same with just 4% not-spots. The picture, in individual nations, varies significantly, particularly in Scotland and Wales, however.

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 around the UK's roads at around 2%. As with 4G, there are marked variations for individual nations; for example, geographic not-spots across Scotland remain higher than the rest of the UK (at around 11% compared with around 5% for the UK as a whole).

5G: We are still 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 which we intend to publish for the first time in our December 2021 report.

Schemes across the UK and Nations supporting broadband networks

In March 2021 Ofcom published its Wholesale Fixed Telecoms review,[8] setting out a number of measures to incentivise investment in network infrastructure – giving regulatory certainty and allowing companies to make a fair return whilst ensuring consumers continue to have access to affordable broadband as new networks are rolled out. As a result of the review BT has increased the number of premises it has committed to connect with fibre.

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[6] 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

[7] This has been revised for 2026 since our last update

[8] Statement: Promoting investment and competition in fibre networks – Wholesale Fixed Telecoms Market Review 2021-26 - Ofcom

UK: On 19th March the UK Government announced "Project Gigabit" [9]; the £5bn infrastructure project fund to support rollout of gigabit capable broadband to homes and premises in hard- to-reach places. The first areas to benefit from the funding were announced and additional £210 million worth of gigabit vouchers released. DCMS issued an update mid-August 2021, announcing a full delivery plan for the first 1 million premises, phase 1, with a plan for phase 1b to follow. Procurement for phase 2 is expected to commence mid-2022.

The Government's "Improving Connectivity for Very Hard to Reach Premises" has completed its call for evidence and is examining responses with a view to action[10]. DCMS is currently considering 3000 responses before considering options for "very hard to reach" premises.

The UK Government has announced that over 600,000 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. BT has accelerated its full fibre rollout from 20 to 25 million by 2026[11], similarly Virgin Media O2 intends to roll out full fibre across its network by 2028[12].

Scotland: In July 2021, the Scottish Government published a report[13] in relation to its Digital Strategy, which highlights progress in respect of their Reaching 100% ("R100")[14] and Scottish 4G infill programmes. This followed an announcement[15] at the end of May 2021 of an additional £3.75m for the 4G infill programme that would fund an additional 9 masts that would improve mobile coverage in some of the most rural parts of Scotland.

Additional support is also being provided to ensure that consumers can access a broadband service that can support superfast speeds by the end of 2021 delivered through a national demand-led voucher scheme, the Scottish Broadband Voucher Scheme[16]. In some cases, rural addresses may be eligible to combine Scottish Government funding of up to £5,000 with funding from the UK Government's Gigabit Broadband Voucher Scheme (GBVS) which provides £1,500 for rural homes and £3,500 for rural businesses. An online checker is available for people to find out about their eligibility. Voucher schemes may be available for a range of technologies: FTTP; FWA, either cellular or point to point; or satellite. The technology chosen will be balanced on what is available in the area and what is suitable for the particular property.

Wales: The Welsh Government continues to provide top-up funds[17] through its voucher scheme, for those rural premises qualifying under the UK Government Gigabit Capable Broadband scheme. In addition, the Welsh Government has made £10 million available through its Local Broadband Fund to support local authorities and social enterprises to deliver broadband projects locally. The Access

[9] Government launches new £5bn 'Project Gigabit' - GOV.UK (www.gov.uk)
[10] https://www.gov.uk/government/consultations/improving-broadband-for-very-hard-to-reach-premises
[11] BT to increase and accelerate FTTP build to 25m premises by the end of 2026
[12] Virgin Media O2 bolsters future network with fibre upgrade plan - Virgin Media O2
[13] https://www.gov.scot/publications/realising-scotlands-full-potential-digital-world-digital-strategy-scotland-progress-report-2017-2021/
[14] https://www.scotlandsuperfast.com/the-r100-programme/r100-superfast-access-for-all/
[15] https://www.gov.scot/news/gbp-3-75-million-to-improve-rural-connectivity/
[16] https://www.scotlandsuperfast.com/the-r100-programme/scottish-broadband-voucher-scheme/
[17] Wales – Gigabit Vouchers (culture.gov.uk)

Broadband Cymru[18] scheme also provides grants to fund (or part-fund) the installation costs of new broadband connections for homes and businesses in Wales.

Northern Ireland: Project Stratum, the Northern Ireland Executive's broadband intervention programme, is to receive an extra £25m through the UK Government's Project Gigabit programme, which will extend fibre broadband to an additional 8,500 premises.[19] The premises are among those not covered by the first batch of Project Stratum funding, announced last year (circa 76,000).

Further funding from the Project Gigabit programme of £24m has also been announced for the Full Fibre Northern Ireland (FFNI) programme to connect hundreds of public buildings to gigabit capable networks[20]. The FFNI project is aiming to connect nearly 1,000 public buildings - including hospitals, GP surgeries, council offices and community centres - to gigabit broadband by March 2022.

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 once a year.

[18] Access Broadband Cymru | GOV.WALES
[19] https://www.fibrus.com/news/additional-investment
[20] https://www.bbc.co.uk/news/uk-northern-ireland-57644495

2. Dashboards

Fixed broadband

Access to full fibre	September 2020	January 2021	May 2021
UK	18%	21%	24%
England	16%	19%	23%
Northern Ireland	56%	63%	67%
Scotland	17%	20%	23%
Wales	19%	21%	24%

Access to Gigabit capable services	September 2020	January 2021	May 2021
UK	27%	37%	40%
England	25%	36%	38%
Northern Ireland	56%	69%	73%
Scotland	42%	44%	47%
Wales	19%	28%	30%

Access to Ultrafast services	September 2020	January 2021	May 2021
UK	59%	61%	62%
England	61%	62%	64%
Northern Ireland	64%	69%	73%
Scotland	52%	54%	57%
Wales	37%	38%	40%

Access to Superfast services	September 2020	January 2021	May 2021
UK	96%	96%	96%
England	96%	96%	96%
Northern Ireland	89%	90%	90%
Scotland	94%	94%	94%
Wales	94%	94%	94%

Access to 10 Mbit/s services	September 2020	January 2021	May 2021
UK	98%	98%	98%
England	99%	99%	99%
Northern Ireland	94%	94%	95%
Scotland	97%	97%	97%
Wales	97%	97%	97%

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: All figures refer to residential properties only.

Fixed Wireless Access

Since our last report we have increased the number of Wireless Internet Service Providers (WISPs) from whom we collect Fixed Wireless Access service data. The following shows premises where decent broadband is obtainable via FWA.

Fixed Wireless Access	January 2021 % premises covered	May 2021 % premises covered
UK (Mobile Network Operator - MNO)	94%	93%
UK (Wireless Internet Service Provider - WISP)	5%	6%

USO eligibility

Percentage of homes and businesses unable to access a decent fixed or FWA broadband service, that is at least 10 Mbit/s download speed and at least 1 Mbit/s upload speed[21].

Unable to receive 10 Mbit/s download and 1 Mbit/s upload services (potentially USO eligible)	September 2020	January 2021	May 2021
UK	1%	1%	0.4%
England	0.5%	0.5%	0.3%
Northern Ireland	2%	2%	2%
Scotland	1%	1%	1%
Wales	1%	1%	1%

[21] *In our Spring update we reported on the percentage of properties unable to access a decent broadband service based on fixed access only. To allow for a comparison, we note that the percentages for premises without decent broadband when only fixed access is taken into account are the same as the Spring update.*

4G coverage

Premises (outdoor) covered by all operators	September 2020	January 2021	May 2021
UK	98%	98%	98%
England	98%	98%	98%
Northern Ireland	94%	94%	94%
Scotland	96%	96%	96%
Wales	93%	93%	93%

Geographic area covered by all operators	September 2020	January 2021	May 2021
UK	69%	69%	69%
England	84%	84%	84%
Northern Ireland	79%	79%	79%
Scotland	44%	44%	44%
Wales	60%	60%	60%

Geographic area not covered by any operator	September 2020	January 2021	May 2021
UK	9%	9%	8%
England	3%	3%	3%
Northern Ireland	3%	3%	3%
Scotland	19%	19%	19%
Wales	10%	10%	10%

Coverage of all roads by all operators	September 2020	January 2021	May 2021
UK	59%	59%	60%
England	66%	66%	67%
Northern Ireland	48%	48%	48%
Scotland	46%	46%	46%
Wales	49%	49%	49%

All roads not covered by any operator	September 2020	January 2021	May 2021
UK	4%	4%	4%
England	2%	2%	2%
Northern Ireland	7%	7%	7%
Scotland	8%	8%	8%
Wales	10%	10%	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.

Voice and text coverage

Premises (outdoor) covered by all operators	September 2020	January 2021	May 2021
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 2020	January 2021	May 2021
UK	80%	80%	80%
England	92%	92%	92%
Northern Ireland	87%	87%	87%
Scotland	59%	59%	59%
Wales	78%	78%	78%

Geographic area not covered by any operator	September 2020	January 2021	May 2021
UK	5%	5%	5%
England	1%	1%	1%
Northern Ireland	1%	1%	1%
Scotland	11%	11%	11%
Wales	5%	5%	5%

Coverage of all roads by all operators	September 2020	January 2021	May 2021
UK	77%	77%	77%
England	83%	83%	84%
Northern Ireland	64%	65%	65%
Scotland	63%	63%	64%
Wales	70%	71%	71%

All roads not covered by any operator	September 2020	January 2021	May 2021
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).