



Northumberland

County Council

BROADBAND CONNECTIVITY UPDATE

COMMITTEE: CORPORATE SERVICES AND ECONOMIC GROWTH OSC

DATE: 10th October 2022

Report of: Chris Thompson, Director of IT

Cabinet Member: Cllr Richard Wearmouth

Purpose of report

To provide Members with:

- An overview of progress on all broadband / connectivity projects
- Details of forthcoming projects and their likely impact

Recommendations

It is recommended that Members:

- Note the impact of broadband improvement to date and prospects for the future

Link to Corporate Plan

This report is relevant to the “thriving” priority within the NCC Corporate Plan.

Key issues

There are several programmes of work planned, underway or recently completed that contribute to the improvement of digital connectivity in Northumberland.

These programmes are:

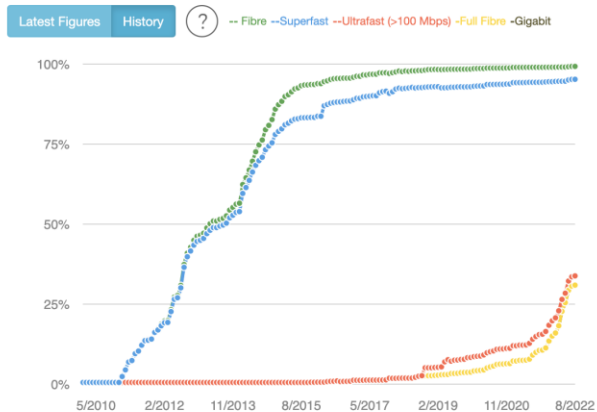
1. **Superfast programme (2014 – 2020)**
2. **Rural Gigabit Programme (2018 - Onwards)**
3. **Borderlands TopUp Vouchers (2020 – 2021)**
4. **Local Full Fibre Network Project (LFFN) (2020 - 2022)**
5. **Project Gigabit (2021 - 2025)**
6. **NCC Top up Vouchers (2022 - Onwards)**
7. **Schools Broadband Project (2022-2025)**
8. **WAN (Wide Area Network) Contract procurement (2023)**
9. **DCIA (Digital Connectivity Infrastructure Accelerator) (2022)**
10. **Mobile “Not spots” (Ongoing)**

Whilst we have made great progress over the last few years through these programmes, we are still slightly behind national connectivity coverage as shown in the table below:

How does Northumberland compare to the national picture?

Connection Speed	Property count	N.land	National	Difference
Superfast (Above 30mbps)	166,688	95.25%	97.23%	-1.98%
Full fibre (up to 1000mbps)	54,145	30.94%	38.79%	-7.85%
Below 30mbps	8,313	4.75%	2.77%	1.98%

Northumberland Superfast and Fibre Coverage



Authority classed as Rural-50 (R50) ?

Superfast (>24 Mbps):	96.20%	Below 2 Mbps down:	1.10%
Superfast (>=30 Mbps):	95.25%	Below 10 Mbps down: (Legal USO)	2.22%
Gigabit (DOCSIS 3.1 or FTTP):	30.94%	Below 10 Mbps, 1.2 Mbps up:	2.44%
Full Fibre (FTTP or FTTH):	30.94%	Below 15 Mbps: (High Speed Broadband)	2.99%
Alt Net FTTP: FTTP excluding Openreach, KCOM and Virgin Media RFOG	3.69%	Ultrafast (>100 Mbps):	33.83%
Openreach FTTP:	19.60%	Virgin Media Cable:	8.79%
'Fibre' partial/full at any speed: (FTTC/VDSL/G.fast/Cable/FTTP)	99.29%	Openreach (>30 Mbps):	94.56%
		Openreach G.fast:	4.99%

Coverage percentages include both residential and business premises and is based around postcode level data. The speed available are determined by a model that reconstructs the Openreach exchange/cabinet based network, and takes into account the distance limitations of ADSL2+ and VDSL2/G.fast (FTTC)

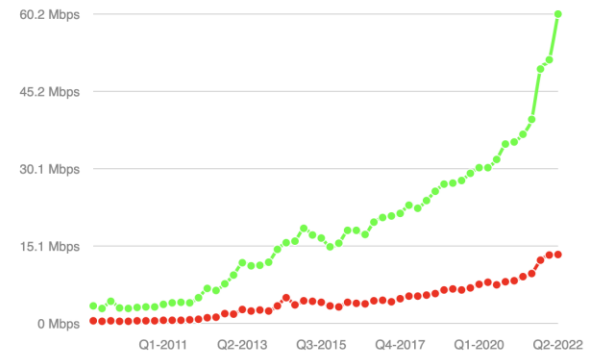
Northumberland Speed Test Results (Mbps)

Last Quarter History

Any Openreach ADSL FTTC Cable FTTH 3G/4G

ADSL, ADSL2+, FTTC, fibre, cable, mobile and wireless speeds ?

Technology Split: ADSL 11.8% FTTC 68.8% Cable 4.9% FTTH 14.4%



Estimated Maximum Mean Download Speed:

328 Mbps

This figure is based around everyone buying the fastest Virgin Media, KC or Openreach product available to them, based on current product availability. Distance limitations of ADSL2+ and VDSL2 are factored into the calculation.

Speed test results are based on the analysis of results from our [speed test](#) or partners who use our speed test service. We believe this is the largest analysis of crowd sourced speed test data for the UK and the technology splits by area help to show what the public is experiencing for the different types of services across the UK.

Background

Due to the diverse geography of Northumberland and the rurality of much of the county, delivering good digital connectivity across the whole county has been a perennial challenge. The Covid crisis in 2020 and 2021 brought the need for good connectivity into even sharper focus with many residents struggling to work from home and children to access online learning.

The Superfast programme had made great inroads in delivering broadband speeds of at least 30Mbps to just over 95% of premises which is just below the UK total of 97% but that still leaves almost 5% of premises with speeds below 30Mbps – and 2% below 10Mbps. These harder to reach premises are a priority that NCC have been working with BDUK at a national level to reach a deliverable solution to mitigate this digital inequality.

A positive outcome is that the rollout of gigabit capable fibre to the premises (FTTP) has accelerated, meaning that since January 2022, the number of premises in Northumberland able to receive speeds of over 100Mbps has more than doubled from 15% to 33.5%. This has in part been due to commercial investment by suppliers, but also positively impacted

by the Rural Gigabit Voucher Scheme and Borderlands funded top-up and by the Local Full Fibre Network (LFFN) project which has just come to an end. This momentum in fibre connections will continue with a number of projects that are set to start delivering in the coming months and the potential for better 4G mobile coverage and the beginnings of a 5G network. The continued commitment of Northumberland councillors to support digital initiatives will mean that the population will be able to access digital services on an equal footing and the County will become an even more attractive place to live, work and invest.

Progress to Date

1. Superfast programme

This programme ran from 2014 to early 2020 and represented an investment of more than £22million (£12.4million from BDUK and £9.6million from NCC). The proliferation of green cabinets across the county led to 95% being able to get speeds over 30Mbps but the shortcoming of this programme was that those properties, mostly but not exclusively in rural areas, that were further away from the cabinets received a much slower service. The take up of these superfast services by residents from this programme alone currently sits at 80.14% accurate as of April 2022, averaged across all 3 superfast contracts. This continues to benefit NCC with BT/Openreach granting interval payments to NCC based on the level of take up.

2. Rural Gigabit Programme

The nationally funded programme offered voucher subsidy to residents and businesses to enable the cost of FTTP connection to be made. BDUK made the choice to prioritise rural premises so the vouchers were only available to those who lived in designated 'rural' areas. However the funding at £1500 for homes and £3500 for businesses frequently fell short of the connection cost for hard to reach premises. This programme ended in 2021 and was replaced by 'Project Gigabit' which offered vouchers in the same way – but has a wider remit (see below). Just under 1500 vouchers were paid out to Northumberland between October 2018 and June 2022 delivering over £2.85m in voucher value to residents. Many more vouchers are still being processed to further benefit those in voucher priority areas.

3. Borderlands top-up vouchers

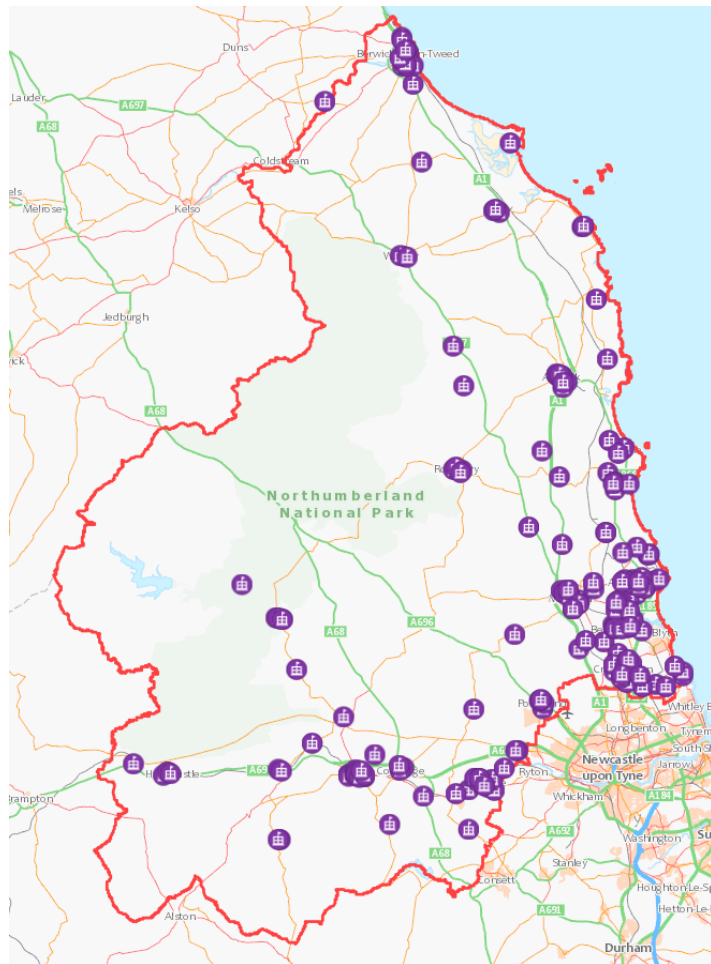
Northumberland and Cumbria both benefited from £4million (combined) from the Borderlands Growth Deal to fund top up vouchers that would effectively double the amount available to connect premises that were both rural and with speeds below 30Mbps. The voucher scheme ran from July 2020 through to April 2022 and, in Northumberland, it meant that 846 rural premises were able to be connected to gigabit capable FTTP (26% businesses and 74% residential) that would not have been financially viable without the top up. We aim to emulate this success with our own Northumberland based top up scheme (See 2. future projects below)

4. Local Full Fibre Network (LFFN) project

This project to connect public buildings to gigabit capable fibre was funded by BDUK and NCC. The contract was awarded to BT to deliver and work commenced in Spring 2021. In addition to connecting public buildings, any premises that shared a distribution point with them would also be able to access gigabit capable fibre. The aim was for the project to act as a catalyst for further connections by running fibre to the 200+ locations.

- Funding offered: £7.275 million from BDUK and NCC agreed £932k funding
- Funding taken up: £5.874 million from BDUK NCC sites cost £872k
- Number of sites: 270 (original forecast) 216 (completed)
 - 173 funded by BDUK
 - 35 funded by NCC
 - 8 sites at nil cost (funded by BT/Openreach)
 - Reduction in sites due to some academy schools refusing offer of connection and others that were found to be part of commercial rollout (Blyth)
 - Around 940 additional premises connected as a result of the project
- Type of sites: Council depots, Libraries, Schools, Fire Stations, Childrens' Centres, Training Centres, Leisure Centres, Health Centres, Country Parks (including Plessey Woods and Druridge Bay).

The completion of this project has allowed new fibre infrastructure to be installed all across the county from Berwick all the way to Haltwhistle and across to the south east urban areas. This includes new large fibre spines in Prudhoe and Rothbury. (See below) The new connectivity will form the basis of the new 2022 WAN contract.



[LFFN completed sites across the County](#)

Ongoing/Future Projects

1. Project Gigabit

As part of the nationally funded £5 billion project being operated by BDUK that uses multiple approaches to connect homes and businesses across England to gigabit capable broadband.

- Project Gigabit Procurement

Northumberland is one of the first areas in the country to be selected. Suppliers have been invited to bid to deliver FTTP to c.21,000 premises in

Northumberland. The deadline for bids was the end of July 2022 and the successful bidder will be announced in November 2022 with delivery due to start early in 2023. The large 'Type B' procurement which covers Northumberland and Durham (a combined investment for the North East of £89.1million) is split into Initial and Deferred Scope premises (9,300 initial




and 8,300 deferred). The deferred scope are premises that may be delivered commercially so will be held until the Initial premises have been delivered.

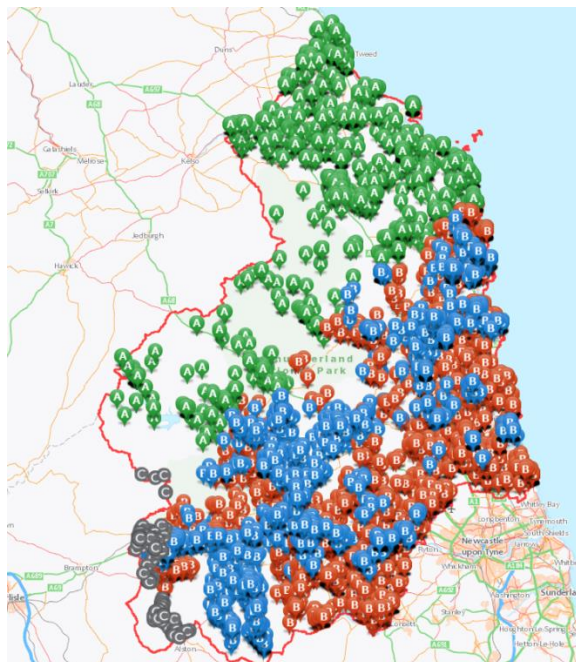
There is also a smaller 'Type A' procurement (£7.3million investment) in Northumberland which will cover around 3,500 premises. The successful bidder is expected to be announced in August 2022. There are also a small number of premises in the south west of the county that fall into the Cumbria procurement as their lines run from a Cumbrian exchange.

There are concerns around how many of the 'very hard to reach' premises will actually be included in the rollout and NCC officers have been working with BDUK to come up with potential solutions which could be enhanced funding for certain premises or consideration of alternative technologies where the cost might be prohibitively high to run fibre.

Northumberland type A and B prems

Procurement_Category

-  Type B Initial Scope
-  Type B Deferred Scope
-  Type A 34.01



[Map showing the extent of Project Gigabit Procurement](#)

- Gigabit Vouchers

These vouchers operate on the similar basis to the Rural Gigabit voucher scheme but are suspended during the current procurement process apart from 'voucher priority areas' which were identified when suppliers already had a well advanced voucher project at the time the procurement started. It is anticipated that the voucher programme will reopen once the procurement is complete but BDUK have yet to confirm a timescale.

2. Top Up Vouchers

The Council have previously agreed £2million of ring-fenced funding for a Northumberland top up voucher scheme which will operate in the same way as the Borderlands top up. This is passing through the BDUK assurance process and should be ready to launch later this autumn. This may need to be reduced at first to £1.5m funding with 2 large previously agreed clawback payments going back to BDUK from the superfast projects. We have confirmed with BDUK that this can then be further topped up later in the lifecycle based on demand for the additional funding.

3. Schools Broadband project

The Council have recently awarded a contract to deliver broadband to more than 110 schools across Northumberland. This will mean that more than 22,000 primary and secondary school children will be able to benefit from gigabit capable (1000Mbps) broadband at school that will enhance their digital learning experience. In some of the village primary schools they have been used to speeds of 10Mbps or even less in some cases, so this new service will transform what they are able to offer whilst keeping costs low.

4. WAN (Wide Area Network) Contract procurement

The council's current Wide Area Network (WAN) connects over 140 of our sites, including libraries, tourist information centres and council offices. The WAN current contract is due to expire in September 2023. The council began a procurement process in January 2022. The team involved in the procurement have evaluated bids from prospective providers. A decision is expected in early September and, depending on the successful bidder, could represent a considerable investment in fibre technology expanding over the contract period with the additional benefit of future proof connections for Council services and expansion of fibre to areas not currently covered. Social Value makes up a significant portion of the scoring system for the bidding suppliers. This puts a large focus on gaining extra full fibre connectivity for residents as part of this contract.

5. DCIA in partnership with NTCA

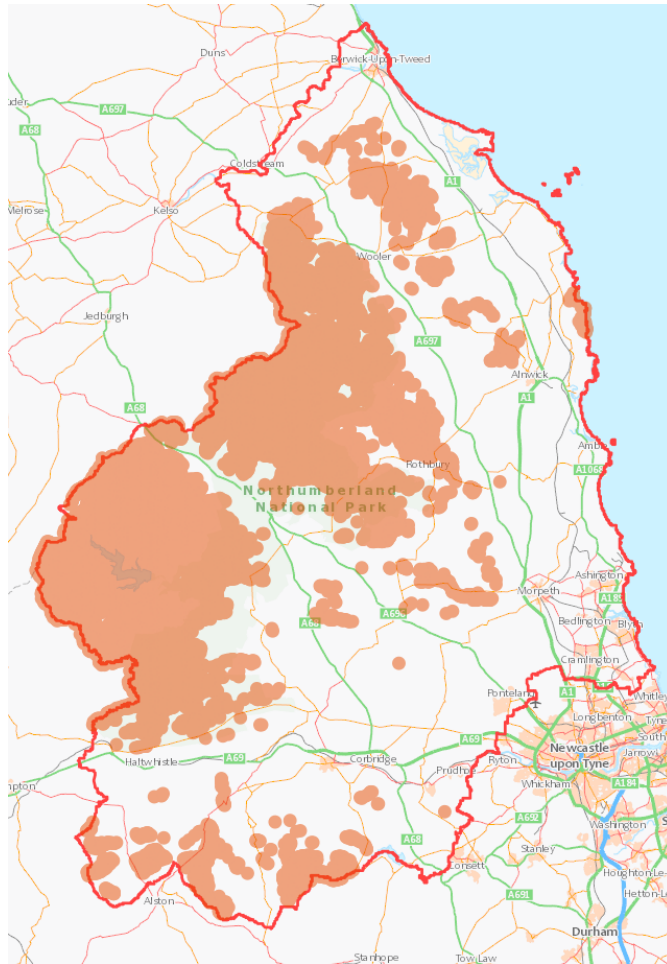
The Digital Connectivity Infrastructure Accelerator (DCIA) Pilot is run by DCMS from HM Treasury's Shared Outcomes Fund and supported by DfT. DCIA has allocated funding to pilots which support the implementation of digital asset management solutions for mapping and brokerage of publicly owned assets for use in the rollout of wireless communication networks. The North of Tyne Combined Authority successfully won funding of just under £497,000 and NCC is part of the project along with North Tyneside, South Tyneside, Newcastle and Sunderland Councils. The aim is to make the process easier for mobile network providers to source

publicly owned sites which could host wireless equipment and facilitate 5G rollout across our region more quickly. The deliverables of the project include a digital catalogue of public assets that MNOs can access to locate suitable assets / furniture for installation of connectivity infrastructure. The project also aims to help streamline the approval processes needed for infrastructure installations.

6. **Mobile “not spots”**

We have been lobbying mobile providers for better coverage across the county with limited success. Currently just under 1,000 premises do not have access to a mobile network operator. The Shared Rural Network programme which allows mobile network operators to share masts should have a positive impact on coverage across Northumberland will reduce that figure by about 300. The Borderlands Growth Deal has allocated funding as part of Digital Borderlands to map out mobile ‘not spots’ and this is currently underway. Farrpoint have been commissioned to survey Cumbria and Northumberland and have provided an interim report showing key areas and the difference that the Shared Rural Network is expected to make. They are currently undertaking a drive by survey of Cumbrian visitor attractions and are expected to start Northumberland in September with a final report due early in 2023.

In addition, work is ongoing with Railsite, with support from Craster Parish Council, to build a mobile mast which would resolve the lack of mobile connectivity for the local community and visitors in a £100,000 project.



[4G not spot areas shown in orange \(Ofcom data\)](#)

Implications

Policy	N/A
Finance and value for money	N/A
Legal	N/A
Procurement	N/A
Human Resources	N/A
Property	N/A
Equalities	N/A

(Impact Assessment attached) Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
Risk Assessment	N/A
Crime & Disorder	N/A
Customer Consideration	N/A
Carbon reduction	N/A
Health and Wellbeing	N/A
Wards	N/A

Background papers:

Report sign off.

Authors must ensure that officers and members have agreed the content of the report:

	Full Name of Officer
Monitoring Officer/Legal	Suki Binjal
Executive Director of Finance & S151 Officer	Jan Willis
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