Northumberland
County Council

Committee Name: Corporate Services and Economic Growth Overview &
Scrutiny Committee

Meeting date: 26th February 2024

Broadband update

Report of Councillor(s) Cllr Richard Wearmouth, Deputy Leader and Cabinet Member for
Corporate Services

Responsible Officer(s): Jan Willis, Executive Director for Resources & Transformation,
S151 Officer

1.   Link to Key Priorities of the Corporate Plan

This report is relevant to Tackling Inequalities and Economic Growth priorities within
the NCC Corporate Plan 2023-2026.

2.   Purpose of report

2.1.   To provide an overview of progress on broadband connectivity projects in
Northumberland

2.2.   To provide an overview of the UK Telephone network move to digital.

3.   Recommendations

3.1.   It is recommended that Members note the broadband improvement to date and
prospects for the future.

4.   Background

4.1   Despite commercial rollout of broadband and grant funded schemes such as
Superfast and LFFN (Local Full Fibre Network), there are still premises in
Northumberland without access to suitable broadband connectivity.

4.2 Northumberland County Council are working alongside BDUK (Building Digital UK) and suppliers to address this, through the following national and locally funded interventions:

- BDUK - Project Gigabit

- BDUK - Gigabit Vouchers

- Northumberland - Top-Up vouchers

- Northumberland - WAN social value

4.3 In addition to the broadband programmes, the Telecommunications industry are leading a modernisation programme on the UKs telephone network. This will mean upgrading equipment in telephone exchanges from analogue to digital and in many cases, connecting landline telephone equipment to broadband routers in the home.

5.   Broadband speeds

5.1. Broadband speeds are measured in Megabits per second or Mbps. New technologies and media formats such as 4k streaming, gaming and HD video calling require faster broadband speeds. In addition, households and businesses with many users, will require higher speeds / bandwidth.

5.2. Most multi-occupancy households will require 10Mbps to suit basic needs. The table below illustrates indicative minimum speeds for a single user.

Activity	Minimum Speed
Browsing internet / Checking emails	1 – 3Mbps
Video Conference	3Mbps +
Streaming	5-25Mbps
Gaming	100Mbps

5.3. The table below illustrates the different broadband speeds that are provided by suppliers where infrastructure allows:

Broadband Type	Typical Download	Upload Speed	Example Activity	Real world comparison
Standard Broadband (ADSL)	10 - 24 Mbps	1 - 5 Mbps	Browsing email, light web browsing, basic online gaming	Downloading a movie: 40-80 minutes

Superfast Broadband (FTTC)	30 - 80 Mbps	5 - 20 Mbps	Streaming HD video, online gaming, video conferencing	Downloading a movie: 2-10 minutes
Ultrafast Broadband (FTTP)	100 Mbps - 1000 Mbps	50 - 100 Mbps	4K/8K video streaming, large file transfers, cloud gaming	Downloading a movie: Less than 30 seconds

6. Broadband connectivity in Northumberland

6.1.   High level summary of broadband connectivity in Northumberland:

- There are approximately **182,000** premises in Northumberland

- **7,090** (3.9%) Have Under 30mbps or No speed Estimated

- **174,900** (96.10%) Have access to >30mb (Superfast)

- **123,923** (68.09%) Have access to >100mb (Ultrafast)

6.2.   Access to ultrafast broadband has increased by over 200% in the last 2 years in Northumberland, compared to 19.8% nationally.

6.3.   The number of properties without access to broadband, or to speeds below 2Mbps has dropped by 43%

6.4. Table: How connectivity has progressed in Northumberland in the last 2 years:

Northumberland	2022	2024	% Improvement
Access to >100Mbps	19.8%	68.09%	+243.8%
Access to >30Mbps	94.5%	96.1%	+1.69%
Under 30Mbps or No Speed Estimate	5.5%	3.9%	-29.1%
Under 2Mbps	1.83%	1.04%	-43.17%

6.5. Table: How connectivity has progressed nationally in the last 2 years:

National	2022	2024	% improvement
Access to >100Mb/s	68.1%	81.57%	+19.78%
Access to >30Mb/s	96.9%	97.85%	+0.99%
Under 30Mbps or No Speed Estimate	3.1%	2.15%	-30.64%
Under 2Mbps*	0.4%	0.28%	-30%

*this figure is estimated based on Ofcom connected nations paper

7. Connectivity by Ward

7.1. The following tables show the top 5 best connected and the 5 worst connected wards in Northumberland. The figures used in the tables are based on data from Sept 2023. A full list showing connectivity by ward is available in the appendix.

7.2. Table: Wards with best connectivity – top 5 for Superfast (30Mbps) or above

Ward	premises	> 30Mbps	Percentage >30Mbps
Cramlington North	2014	2013	99.95%
Cramlington Eastfield	2228	2225	99.87%
Cramlington South East	2493	2489	99.84%
Cowpen	2342	2336	99.74%
Newsham	2999	2991	99.73%

7.3. Table: Wards with best connectivity – top 5 for Ultrafast (Over 100mbps)

Ward	premises	> 100Mbps	Percentage >100Mbps
Cramlington North	2014	2013	99.95%
Cramlington Eastfield	2228	2225	99.87%
Cowpen	2342	2336	99.74%
Cramlington South East	2493	2489	99.84%
Bedlington East	2209	2201	99.64%

7.4. Table: Wards with poorest connectivity >30Mbps – top 5

Ward	premises	> 30Mbps	Percentage > 30Mbps
Humshaugh	2289	1820	79.51%
South Tynedale	2744	2216	80.76%
Haydon And Hadrian	2397	2022	84.36%
Bellingham	2489	2121	85.21%
Norham And Islandshires	2873	2456	85.49%

7.5. Table: Wards with poorest connectivity <2Mbps – top 5

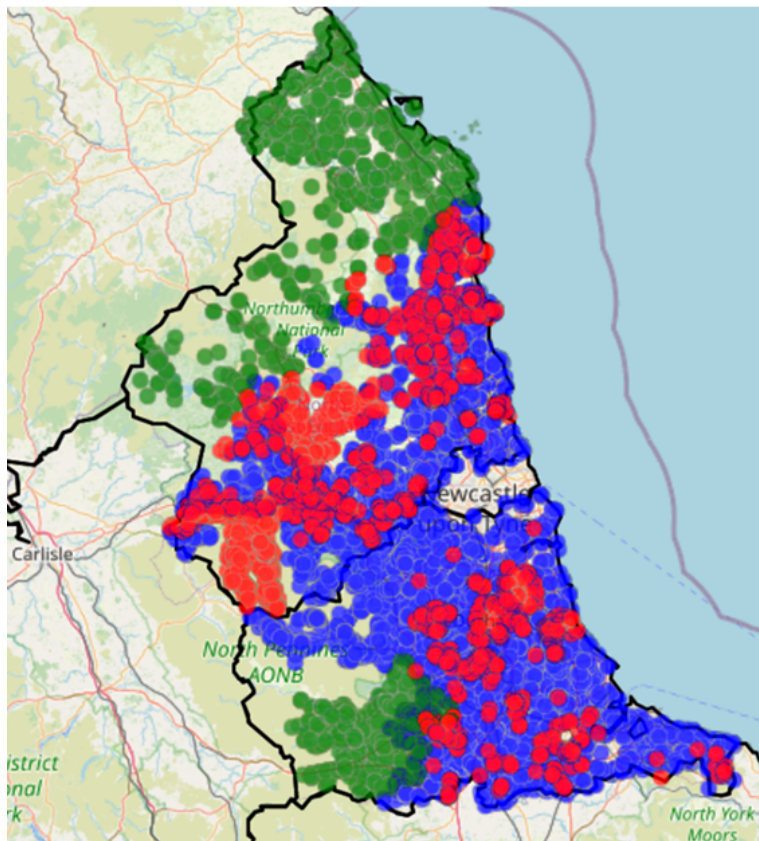| Ward	premises	< 2Mbps	Percentage < 2Mbps
Humshaugh	2289	208	9.1%
South Tynedale	2744	163	5.9%
Norham And Islandshires	2873	158	5.5%
Longhorsley	2666	131	4.9%
Bellingham	2489	123	4.9%

8. Project Gigabit – Building Digital UK (BDUK) Funded project

8.1. Project Gigabit aimed to provide gigabit (1000Mbps) connectivity to over 20,000 properties in Northumberland, through 2 procurements:

- Type A Procurement > 3,750 premises

- Type B Procurement > 17,000 premises

8.2.   Project Gigabit is a national programme aimed at providing Gigabit broadband to hard-to-reach areas. These are areas of the UK where commercial providers have not already, or do not plan to provide services to.

8.3.   The programme is made up of large-scale procurements to connect high volumes of properties. Northumberland was selected to be in the first tranche of the programme. Suppliers were invited to bid for funding to connect multiple premises given areas deemed hard to reach.

8.4.   There were 2 procurements in Northumberland, covering 2 areas of the county. The procurements were labelled Type A and Type B. In addition, there were c.200 properties in the west of the county, bordering Cumbria, that were covered by a Cumbria procurement lot.

8.5.   Type A is a £7.3m contract awarded to GoFibre on 14 October 2022 and delivery is underway to connect over 3750 premises in North Northumberland

8.6.   The Type B procurement has stalled after the supplier initially awarded a contract to roll out is no longer able to sign the contract that it had bid for.

8.7.   Building Digital UK (BDUK) is already working with other suppliers to identify alternative routes for connecting communities that were set to benefit from that contract. BDUK remains focused on getting delivery underway as soon as possible and will press those suppliers to deliver in the same timeframe (2026)

8.8.   The map below details the proposed intervention areas:

Green - Lot 4 type A, Lot 34 type A
Blue - Combined Lots 4 and 34 type B (initial scope)
Red - Combined Lots 4 and 34 type B (deferred scope)

8.9.   A full closure report for the procurement lot is available online at
https://www.gov.uk/government/consultations/uk-gigabit-programme-durham-public-review/outcome/durham-tyneside-and-teesside-lot-4-and-northumberland-lot-34-public-review-closure-notice#annexc

9. Northumberland Council WAN

9.1.   Northumberland County Council has 138 sites that require fast fibre connections for our IT network and infrastructure. This infrastructure is known as our Wide Area Network (WAN).

9.2.   As part of our Wide Area Network (WAN) contract that was procured in 2022, we negotiated a large social value element that will see 260km of fibre installed into our county, passing c.120,000 premises. In addition to the fibre build, Commsworld will be providing digital inclusion interventions, such as free broadband in 86 village halls, to encourage uptake and upskilling.

9.3.   The proposed fibre build by Commsworld is shown below; with the orange lines showing the rural build and the pink lines showing the urban build. The green areas show where commercial partners intend to build.

9.4.   This urban build will provide Fibre to the Premise (FTTP) coverage for Morpeth, Ashington, Bedlington and Blyth totalling around 60,000 prems in these more urban areas.
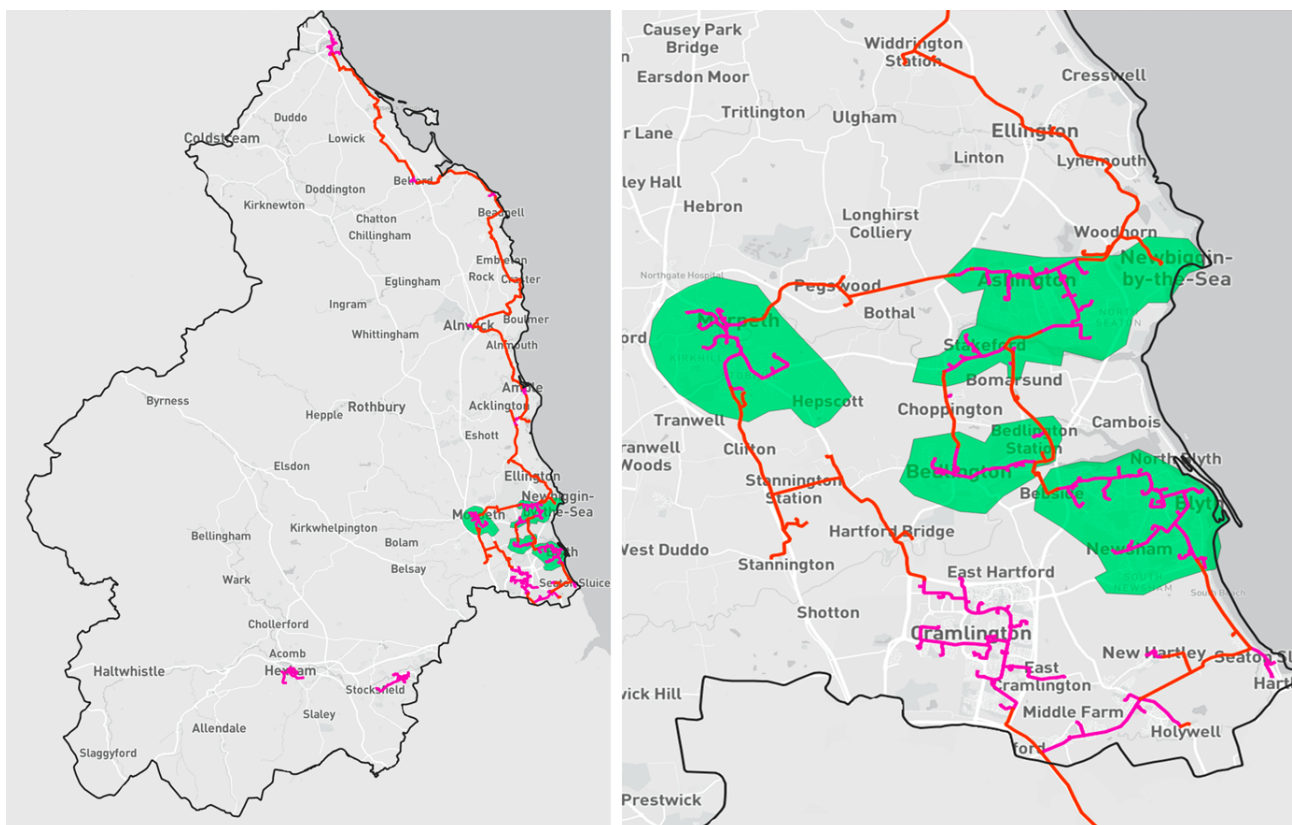
9.5. The areas shaded in pink on the map below indicate areas where vouchers may be a viable option to provide connectivity as a result of the additional infrastructure being installed.
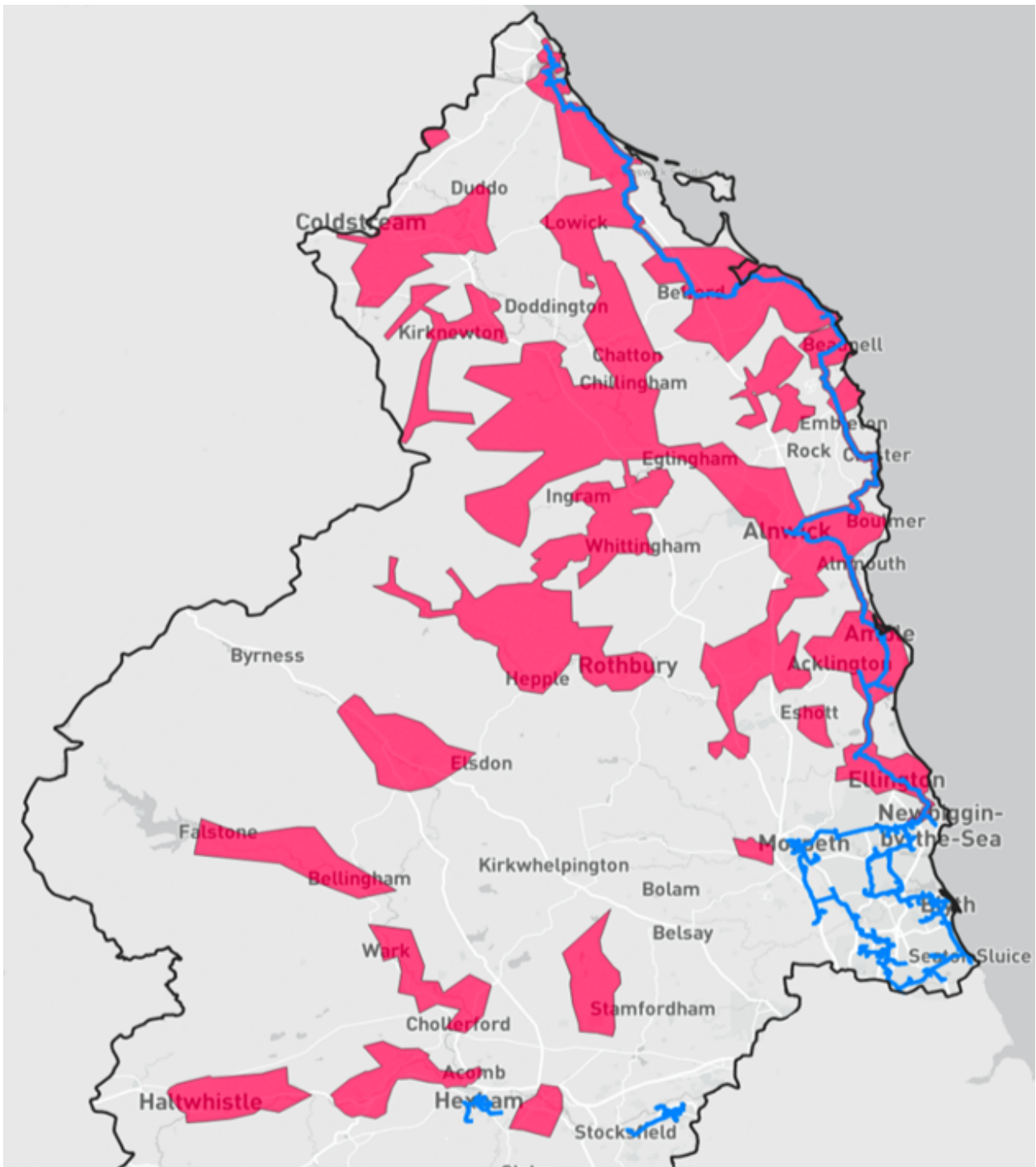
9.6. Alncom are partnering with Commsworld to deliver FTTP connections to an estimated minimum of 50,000 homes in rural areas.

9.7. **Progress on WAN to date**
138 council sites have been migrated to CommsWorld fibre circuits, and 168km of the 260km of new fibre have been installed across the county, opening up more viable options for network providers to install fibre into rural areas.

10.   BDUK Gigabit Vouchers

10.1. BDUK provide vouchers to broadband suppliers up to a value of £4,500 for eligible properties.

10.2. Home and businesses in rural locations which meet the following criteria can use vouchers to support the cost of installing new gigabit-capable connections when part of a group project.

- Existing broadband speeds are less than 100Mbps.
- A gigabit capable network isn't likely to be built to that area commercially in the near future.
- There is no government-funded contract planned or in place to improve the network already.

10.3. Over 3,000 vouchers, worth £7.1m have been issued between October 2018 and November 2022 by BDUK to suppliers to support rural connectivity projects in Northumberland.

11.   NCC Voucher Top-Ups

11.1. The council has recently set aside £1.156m (Cabinet Decision 11ᵗʰ July 2023 – see linked report) of capital funds in a Community Broadband scheme to help top-up BDUK gigabit vouchers, to enable connectivity projects in harder to reach areas.

11.2. The NCC top-up is up to a value of £2,500 for properties with a speed of less than 30Mbps.

11.3. The NCC Top-up combined with the BDUK funded Gigabit voucher will provide up to £7,000 of funding per eligible premise.

11.4. These vouchers have been on hold until Jan 2024 due to BDUK project gigabit procurements. Gigabit vouchers were put on hold, to ensure that vouchers would be prioritised for those premises not otherwise covered by a contracted commercial build via Project Gigabit procurements.

11.5. The figure below illustrates the voucher top-up model.

Top up Vouchers

Helping to connect harder to reach properties
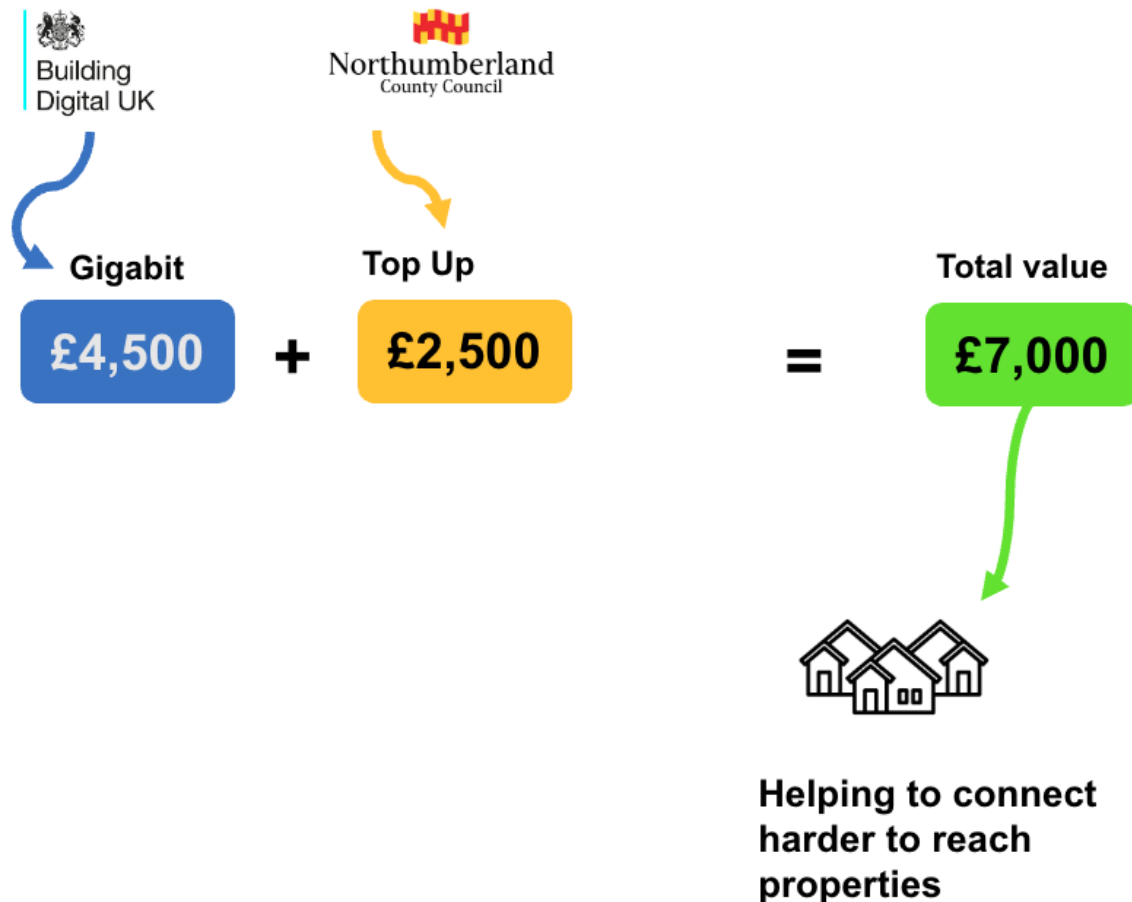
12. Modernisation of Telephony network – Move to Digital

12.1. Between now and 2025, most telephone providers will be moving their customers from old analogue landlines to new upgraded services using digital technology. This means services that rely on the old landline system such as home phones and healthcare devices may need to be updated.

12.2. **What does this mean for most people?**

12.2.1. For most people the impact will be minimal. For residents with an internet connection, the change may be as simple as plugging the phone into the broadband router rather than the socket on the wall.

12.2.2. The individual telecoms providers (For example BT, Sky or TalkTalk) should contact users before the switchover to check in and discuss what people need to do to make sure their service isn't affected.

12.2.3. Residents that do not already have an internet connection may require the installation of some additional equipment in the property to ensure the phone continues to work. The telephone supplier will be in contact before making any changes.

12.3.   **What is the timeline?**

12.3.1. Many users have already been migrated to digital phone lines. Current plans will see users migrated by the end of 2025 and analogue equipment subsequently decommissioned.

12.3.2. Unfortunately, there is no detailed roll out plan and timescales will vary by location and provider. We cannot therefore, at this stage, forecast when a particular user or community will be migrated.

12.3.3. Some suppliers (for example BT) have stated that vulnerable users, including those that do not have a broadband service, use telecare devices or have no mobile coverage will be left towards the end of the programme. However, we have been made aware of examples of users within those categories being migrated already, so this is not a guarantee.

12.4.   **What are the risks?**

12.4.1. The digital service will offer many more services over a home phone compared to what is possible with the existing analogue phone line, however the biggest negative aspect for many users is that digital landlines cannot carry a power connection, so in the event of a power cut they will not work without a suitable backup power source.

12.4.2. Mobile phones should still work, but for those with no other means of calling the emergency services, telecoms providers will offer a solution.

12.4.3. Those with no other way of making emergency calls are being encouraged to make their telecoms provider aware of this now so that they are able to secure alternative provisions

12.4.4. Those with telecare devices will also need to discuss with their provider how to ensure these services will continue to operate using a digital phone line. Most providers, including Northumberland County Council, are already having these discussions with users.

12.5.   **What is being done to mitigate the risks?**

12.5.1. Anyone who feels they fall within the vulnerable user category is encouraged to speak to their supplier to ensure they are aware of the specific circumstances.

12.5.2. Suppliers will look at ways to mitigate the risk to users, including provision of a free battery back-up so the phone will still work during a power cut. However, this support will vary depending on the individual user and the specific supplier.

12.6.   **What is the council doing?**

12.6.1. Whilst this is a telecoms industry-led programme, Northumberland County Council feels it has a duty to inform residents of the upcoming changes and ensure they have the information needed to minimise any risks that this change may bring.

12.6.2. To date the Council is working to ensure County and Parish Councillors are aware of what is happening and that any specific concerns should be raised with that individual's supplier.

12.6.3. The Council have a data sharing agreement with BT and Virgin to help them to identify vulnerable customers with Telecare equipment and provide appropriate support.

12.6.4. Leaflets will be circulated to all residents as part of the council tax bills, informing them of the upcoming changes and what they need to do.

12.6.5. The Council is working with suppliers to support roadshow events for customers (for example; BT will be holding a number of events in Northumberland later in the year), and there are plans to hold additional events as necessary led or assisted by council officers.

12.6.6. Work is underway to ensure partner organisations and volunteers are aware of these changes, as well as internal staff including those involved in Northumberland Communities Together and community hubs.

13. Implications

Policy	None have been identified
Finance and value for money	Capital funding relating to the voucher top-up scheme was agreed at cabinet. Capital scheme funded through gainshare income.
Legal	None identified
Procurement	None identified.
Human resources	None have been identified
Property	None have been identified
The Equalities Act: is a full impact assessment required and attached?	Not applicable Not applicable
Risk assessment	Risks are managed by respective programmes and projects outlined in the report.
Crime and disorder	No implications identified

Customer considerations	Improved connectivity in our region can support improved interaction with the council services, where online services are available
Carbon reduction	Improved connectivity in the region can help support working from home, reducing the need for travel and associate carbon impacts
Health and wellbeing	Improved connectivity may help tackle social isolation in addition to providing access to online support
Wards	(All Wards);

14. Background papers

- https://www.gov.uk/government/consultations/uk-gigabit-programme-durham-public-review/outcome/durham-tyneside-and-teesside-lot-4-and-northumberland-lot-34-public-review-closure-notice#annexc

- https://www.gov.uk/guidance/project-gigabit-network-build-contract-north-northumberland

- https://www.gov.uk/guidance/project-gigabit-uk-gigabit-programme

15. Links to other key reports already published

Decisions taken by the Cabinet on Tuesday, 11 July 2023

16. Author and Contact Details

Chris Thompson, Director of Digital and IT
Email: chris.thompson01@northumberland.gov.uk