

Appendix A

Connecting Cambridgeshire Digital Connectivity Progress Update September 2023

1. Purpose

- 1.1. This report gives a summary of progress in the delivery of the Cambridgeshire and Peterborough Digital Connectivity Strategy for 2022-23 and sets out future priorities for digital connectivity in our area.

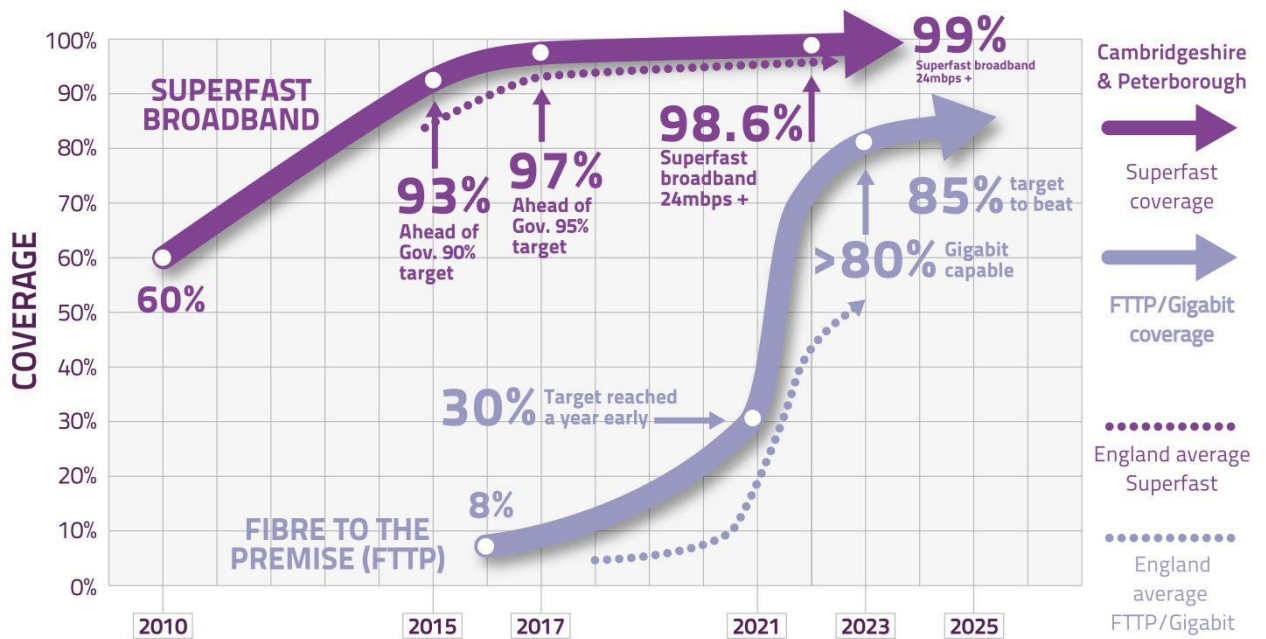
2. Background

- 2.1. The Digital Connectivity Strategy has set challenging targets to help ensure that the Cambridgeshire and Peterborough Combined Authority area is well positioned to take full advantage of current and emerging technology advances.
- 2.2. The delivery of the Digital Connectivity Strategy 2021- 2025 is a key contributor to the Combined Authority's sustainable growth ambitions for Cambridgeshire and Peterborough, helping to ensure that a high speed, accessible digital connectivity infrastructure is available to all – supporting effective public service delivery, thriving communities and sustainable business growth.
- 2.3. Set against the backdrop of the cost-of-living crisis and increasing reliance on digital connectivity in everyday life, together with a rapidly changing commercial telecoms market and unprecedented digital delivery, it is important to identify those who are at risk of being left behind and provide them with the tools they need to thrive.
- 2.4. This progress update reports on the Connecting Cambridgeshire programme driving next-generation broadband connectivity and mobile coverage, using Smart technologies to improve the environment, and extending free public access Wi-Fi, while supporting digital inclusion.
- 2.5. It also highlights how the programme's collaborative work with multiple partners underpins wider ambitions for the region including greater use of sustainable transport, reducing health inequality, progress towards net zero and mitigating climate change.

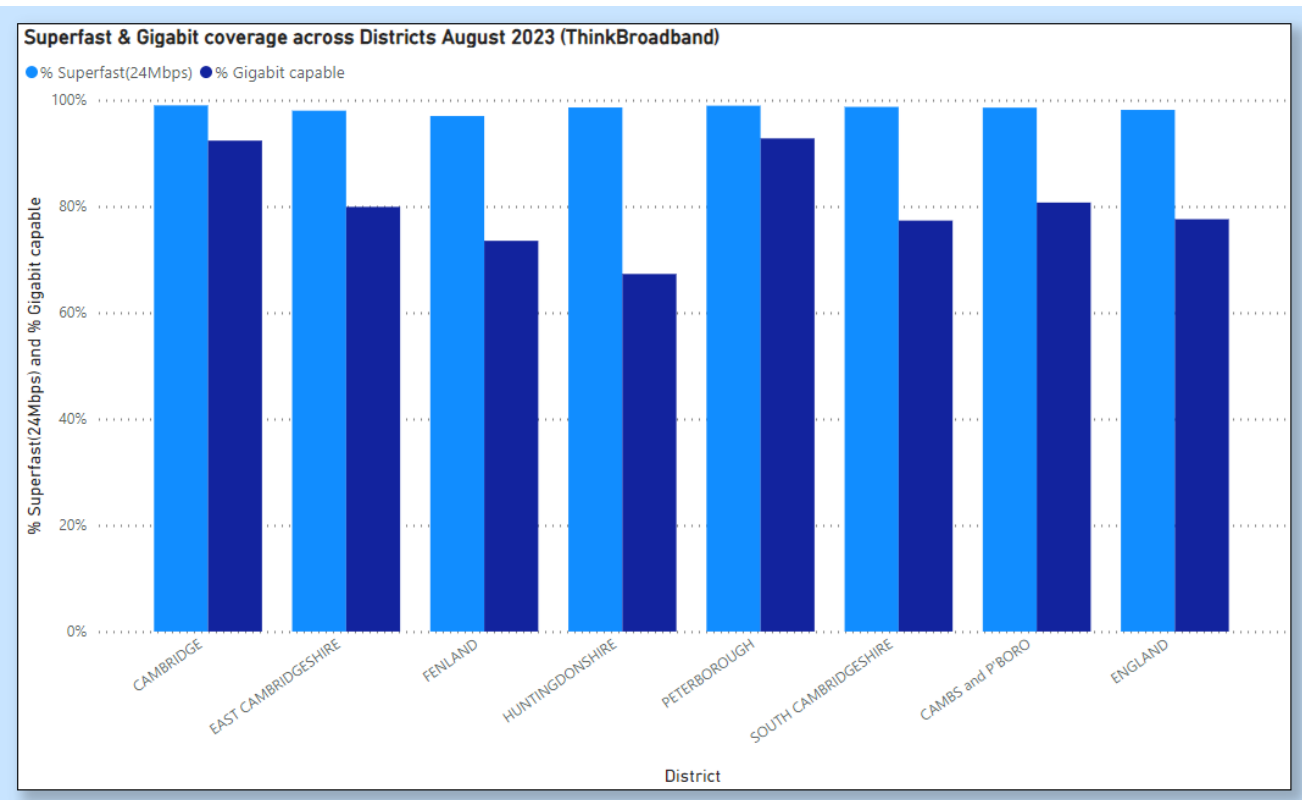
3. Broadband coverage

- 3.1. Superfast and Full Fibre Broadband coverage in Cambridgeshire and Peterborough remains above the national average and ahead of Government targets. Coverage is increasing at pace through direct intervention and commercial deployment with the prospect of future proof connectivity for many more homes and businesses. However, there is more to do to tackle remaining connectivity challenges, which are reducing in number but increasing in complexity.

- Close to 99% of premises can access partial/full fibre ‘superfast’ broadband
- Over 80% of premises can access gigabit-capable full fibre broadband coverage with download speeds of at least 1000Mbps. This puts the programme ahead of projections to achieve the target of 85% gigabit capable coverage by 2025.



- 3.2. The Government’s Project Gigabit £69million contract to extend gigabit-capable full fibre coverage to around 45,000 harder-to-reach premises in Cambridgeshire and Peterborough was awarded to CityFibre in March 2023. CityFibre is investing a further £53m and plans to start the rollout in September 2023, with the first connections expected in early 2024.
- 3.3. The superfast broadband intervention programmes for Cambridgeshire and Peterborough have completed, however Connecting Cambridgeshire’s proactive approach to ‘barrier busting’ continues to be instrumental in encouraging and facilitating commercial delivery of gigabit capable full fibre and improved mobile coverage by leading telecoms providers.
- 3.4. Connecting Cambridgeshire continues to work with communities and suppliers where no Project Gigabit or commercial coverage is planned to ensure residents do not miss out on the opportunity to apply as groups of premises for Rural Gigabit Vouchers to install full fibre connections (£4,500 per premise plus £1,500 top up if eligible) when the Government makes them available in autumn 2023.



3.5. Connecting Cambridgeshire works closely with city/district councils to keep Members and officers updated on the progress of the digital infrastructure strategy and the digital connectivity issues for their area. District Digital Overviews have been developed to provide a one-page summary of digital coverage data for each area to support local digital strategies and help to define digital priorities. The latest versions are available to view on the Connecting Cambridgeshire [website](#).

4. Use of Assets for digital connectivity

4.1. Innovative plans to make Cambridgeshire County Council-owned street lighting columns available to the telecoms market to host a range of devices including small cells to improve mobile coverage, environmental sensor networks, public access Wi-Fi and potentially electric vehicle charging are progressing and will be advertised once the necessary legal agreements are in place.

4.2. A funding bid to deploy 'Smart Poles' has also been submitted to the Smart Infrastructure Pilot Programme (SIPP) for up to £250k of Department for Science Innovation and Technology (DSIT) funding that must be match funded by industry partners.

4.3. The pioneering 'Dig Once' policy to include fibre ducting in new transport infrastructure schemes to be made available on a commercial basis is bringing measurable benefits for the economy, local communities, and the environment. Case studies have been developed with telecoms' operators, who have been able to avoid costly, disruptive retrofitting and encouraged to extend gigabit capable broadband networks to businesses and communities that are

challenging to reach areas including Whittlesey, Cambridge and Hinxton. Fibre ducting is also being installed in several new transport schemes including Cambridge to Cambourne Busway and Addenbrooke's roundabout in Cambridge.

- 4.4. To date, over 21km of additional fibre ducting has been installed or is planned during the construction of new road and cycleway schemes by 2025. Using the Highways England calculator, it is estimated the 'Dig once' policy has already resulted in savings of over 20 tonnes of CO2 emissions in relation to materials use alone over two years, which is equivalent to the carbon emission of close to half a million miles driven by an average car.

5. Mobile connectivity

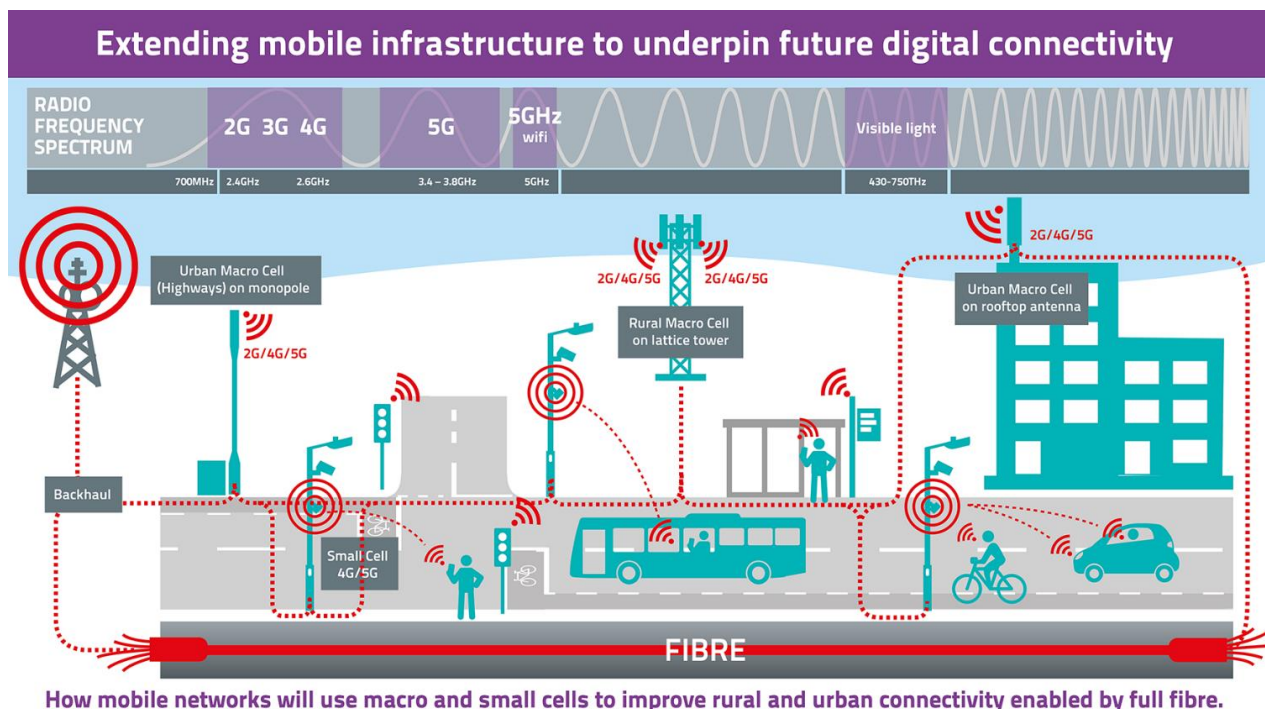
- 5.1. Connecting Cambridgeshire is working with local authorities and mobile network operators (MNOs) looking to invest in 4G and 5G networks to improve coverage and capacity, which will have a long-term economic and social benefit for the area.

- 5.2. Detailed drive and walk mobile coverage testing surveys commissioned by Connecting Cambridgeshire were carried out across the region in March 2023 focussing on known 'partial notspots' in market town centres, business parks, major roads and train stations. The results of coverage by the leading mobile phone providers (EE, O2, Three and Vodafone) have been mapped and analysed in comparison to previous surveys in 2019 to provide an updated baseline for 4G and 5G coverage. This data will be used to highlight poor coverage spots which require further investigation and liaison with operators and Ofcom/DSIT to instigate improvements.

- 5.3. In summary, the survey data shows:

- an overall improvement of 2% in combined network 4G coverage since 2019, with increasing 5G coverage by leading providers
- 4G coverage has improved in several key areas including Cambridge Genome Campus, Chatteris town centre, roads around Hardwick, Whittlesey Station and town centre, and Alconbury Enterprise Zone
- Mixed improvements but still variable coverage requiring improvement in some key areas including Ely town centre and Lancaster Business Park, Granta Park (Great Abington), Littleport, Soham and St Ives.

- 5.4. A telecoms planning legislation training session, led by the programme's dedicated digital connectivity planning resource, has been held to update local council planning, highways, conservation and tree officers and discuss how we can work with Mobile Network Operators to support their rollout plans while monitoring planning applications. Planning applications for new mobile infrastructure have been increasing year on year since 2020/21. In 2022/23 82 planning applications were received across the region of which 31 (36%) were granted permission.



6. 5G

- 6.1. Connecting Cambridgeshire has secured £76k funding to trial Open RAN (Radio Area Network) technology in the region working with AWTG as part of their Future RAN competition—to show how it can be used to improve mobile connectivity.
- 6.2. The result of the programme’s bid for Government funding through the Dept. for Science, Innovation and Technology (DSIT) Open Networks Ecosystem (ONE) Competition to improve mobile capacity for high demand density places and events will be announced in September 2023.
- 6.3. Building on the work that Connecting Cambridgeshire’s Smart team has undertaken to support the Greater Cambridge Partnership (GCP) and its research into autonomous vehicles, plans are underway to trial up to 13 autonomous, electric vehicles. The trials will be run in two areas: between Babraham Park and Ride and Trumpington Park and Ride via the Cambridge BioMedical Campus; and at the University of Cambridge’s West Cambridge Campus. Trials are currently expected to start in April 2024 and will be supported by a private 5G network.

7. Smart sensors

- 7.1. The continuing development of “Internet of Things” (IoT) technology is allowing the collection and analysis of a range of data which can be used support the area’s Net Zero and climate change mitigation strategies, including the collation of environmental, flooding and traffic indicators from sensors.

- 7.2. A number of our IoT solutions makes use of the low power sensor network called LoRaWAN. The LoRaWAN coverage has been expanded to support the deployment of sensors by installing gateways in Ely, Soham, St Neots, Kimbolton and Alconbury, with potential for further coverage in Peterborough, at New Shire Hall and other EastNet locations.
- 7.3. Following successful trials, a total of 32 flood sensors are scheduled to be installed in a range of locations during 2023 to monitor water levels and collect data which can be used to give flood teams and local communities early warning of flooding events.
- 7.4. Up to 24 low-cost Air Quality (AQ) sensors will be installed in a growing number of locations with additional devices set to be deployed on street lighting columns in conjunction with local councils once permissions are agreed. AQ sensors are already being used in March to monitor the impact of the Broad Street works on air quality and will help to provide useful evidence to support transport and environmental improvement schemes in Wisbech, St Neots and other market towns.
- 7.5. Work is also underway to investigate sensor usecases with Cambridgeshire Police and to potentially support the roll-out of bin level sensors in Eddington.

8. Access and Inclusion

- 8.1. The current unprecedented cost of living crisis is creating new challenges and further exacerbating the digital divide, with many more people struggling to access broadband and mobile connectivity. Cuts to service provision also mean it is more difficult for some to access suitable devices (e.g., PCs, laptops, tablets, or smart phones) and access digital skills and confidence support to engage online effectively and safely. It is also anticipated that the planned national digital switchover of copper phonelines from 2026 could affect the most vulnerable in our communities as well as small businesses unprepared for the change.
- 8.2. Connecting Cambridgeshire has responded by expanding signposting and coordination activities in relation to both digital inclusion generally and the digital switchover, including:
 - Appointing an experienced Digital Inclusion lead officer, who joined the Connecting Cambridgeshire team in June and is working with the County Library Service and other key partners to ensure residents can become digitally included across the three main pillars of connectivity, devices, and skills and confidence.
 - Liaising with social housing and network providers to encourage improvements in digital connectivity for tenants, which has seen fibre broadband provision increase from 67% in June 2022 to 82% in March 2023. In addition, helping these organisations deliver the corporate social responsibility/social value ambitions through digital inclusion initiatives.

- Working with Libraries, Cambridgeshire Skills and CPCA Skills colleagues to identify complementary digital support and skills needs and interventions.
- Working with MobileUK, the organisation representing national mobile operators, to champion digital inclusion and raise awareness of social tariffs and additional customer support for the financially vulnerable. A Social Tariff awareness campaign was launched in late May 2023 in libraries and schools, alongside social media posts, to highlight cheaper broadband and mobile deals available for people on low incomes or claiming government benefits. To complement this, working with libraries to deliver free SIM cards through the National Data Bank to those most in need.
- Collaborating with local councils and our partners to raise awareness of the digital switchover and to implement the solutions required to support residents and businesses, minimising impact on their day-to-day lives and trading.
- Expanding the reach of free CambWifi across Cambridgeshire market towns helping to improve digital inclusion and support local economies. The secure public access Wi-Fi network is now live in Ely, Huntingdon, March, Oxmoor, Ramsey, St Ives, St Neots, Peterborough, and Whittlesey town centres. It is also widely available in public buildings, libraries, and leisure centres across the county, plus Cambridge Park and Ride sites with plans to extend on street public Wi-Fi to Northstowe and Cambourne.
- Delivering a 'State of Digital Inclusion' report to analyse the past and present digital inclusion work across the county, which will help determine recommendations for a long-term, sustainable digital inclusion strategy and programme, to consolidate and complement the work being delivered by partners, and work to minimise any gaps in provision, reaching those who are acutely digitally excluded and have complex and/or additional needs.

9. Focus for coming year and beyond

- 9.1. Connecting Cambridgeshire is committed to achieve Digital Connectivity Strategy targets and aims to ensure Cambridgeshire and Peterborough maintains its vanguard position as the leader of technological innovation.
- 9.2. Mindful that Cambridgeshire and Peterborough do not yet have ubiquitous full fibre coverage, therefore Connecting Cambridgeshire continues to seek all additional funding opportunities to extend the reach of fibre. This is in areas where the telecommunications infrastructure providers have no plans to cover and is typically in the most remote and rurally isolated areas.

- 9.3. The programme is continuing to extend digital connectivity further to the remaining 1% of community that are unable to get superfast broadband, by tackling some of the hardest to reach areas of Cambridgeshire and Peterborough through a range of solutions including full fibre, wireless connectivity including satellite, mobile, Wi-Fi.
- 9.4. Place-based infrastructure is critical to delivering growth and productivity now and, in the future, and directly benefits local businesses and residents by providing access to new jobs and improved services. Connecting Cambridgeshire will be looking into identifying new business models and applications suitable for commercial development of 5G, boosting the skills and employment opportunities for residents and encouraging the creation of new tourism business opportunities across the region.
- 9.5. Connecting Cambridgeshire will develop a long term sustainable Digital Inclusion Strategy to help more people to go online and also help tackle wider social issues, support economic growth and close equality gaps.

10. Useful links

[District Digital Overviews on Connecting Cambridgeshire website](#)

Mobile UK [Digital Inclusion Infographic](#)

MobileUK 5G [Local Authority Toolkit](#)

DCF Report: Local Authorities as Connectivity Enablers

[Local-Authorities-as-Connectivity-Enablers-Report.pdf \(connectivityuk.org\)](#)