

Appendix A

Connecting Cambridgeshire Digital Connectivity Strategy 2021-25 Progress Update and Overview of the Proposed Digital Connectivity Strategy 2025-29

September 2024

1. Purpose

- 1.1. This report provides an update on the progress in 2023-24 of the Cambridgeshire and Peterborough Digital Connectivity Strategy and seeks approval for the revised Digital Connectivity Strategy covering the period from 2025 to 2029.

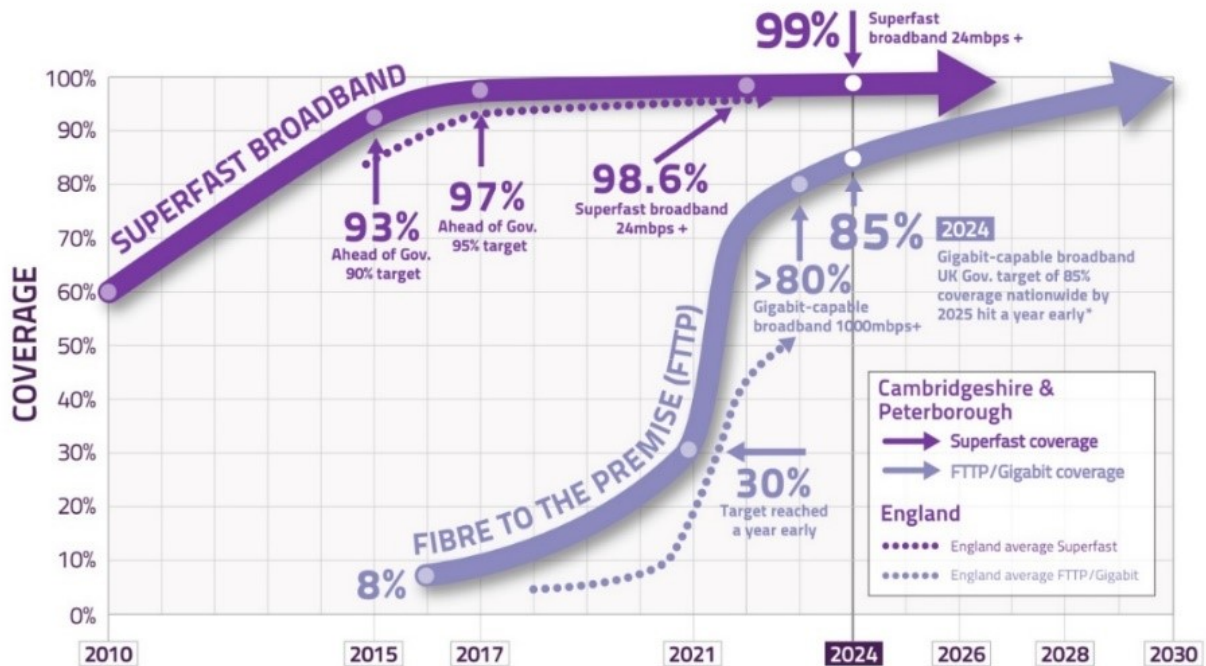
2. Background

- 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 Digital Connectivity Strategy for 2021-2025 is a key element of the Cambridgeshire and Peterborough Combined Authority (CPCA) and the Local Transport and Connectivity Plan (LTCP). This strategy is essential for ensuring that everyone has access to high-speed, reliable digital connectivity, supporting effective public services, vibrant communities, and sustainable growth.
- 2.3. The strategy aligns with broader national objectives, such as the levelling-up agenda and net-zero commitments, emphasizing the critical role digital strategies play in shaping the future of local development.
- 2.4. Given the current cost-of-living challenges, the increasing reliance on digital connectivity in everyday life, the rapidly evolving commercial telecommunications market, and unprecedented digital advancements, it is vital to identify those at risk of being left behind. Providing these individuals with the necessary resources to navigate the increasingly digital world is crucial to ensuring they are not excluded/can take full advantages of the digital world.
- 2.5. This progress update covers the last 12 months of the Connecting Cambridgeshire programme activities from April 2023 to March 2024. The programme focused on advancing next-generation digital infrastructure, including broadband (expanding full fibre coverage) and mobile networks (enhancing 4G and 5G coverage). It also leveraged smart technologies to

improve environmental outcomes, extend free public Wi-Fi access, and promote digital inclusion by increasing connectivity availability for both residents and businesses.

3. Broadband coverage

- 3.1. Broadband coverage in Cambridgeshire and Peterborough continues to outpace the national average, exceeding government targets for Superfast and Full Fibre deployment. The region is experiencing rapid growth in coverage through both direct intervention and commercial efforts, paving the way for future-proof connectivity for a growing number of homes and businesses.
- 3.2. The region has already exceeded the government’s target of 85% gigabit-capable coverage, achieving this milestone more than a year ahead of schedule. While gigabit capable broadband coverage in the region is above the national average, efforts are still needed to achieve full fibre broadband coverage and eliminate any remaining coverage gaps or "not-spots".



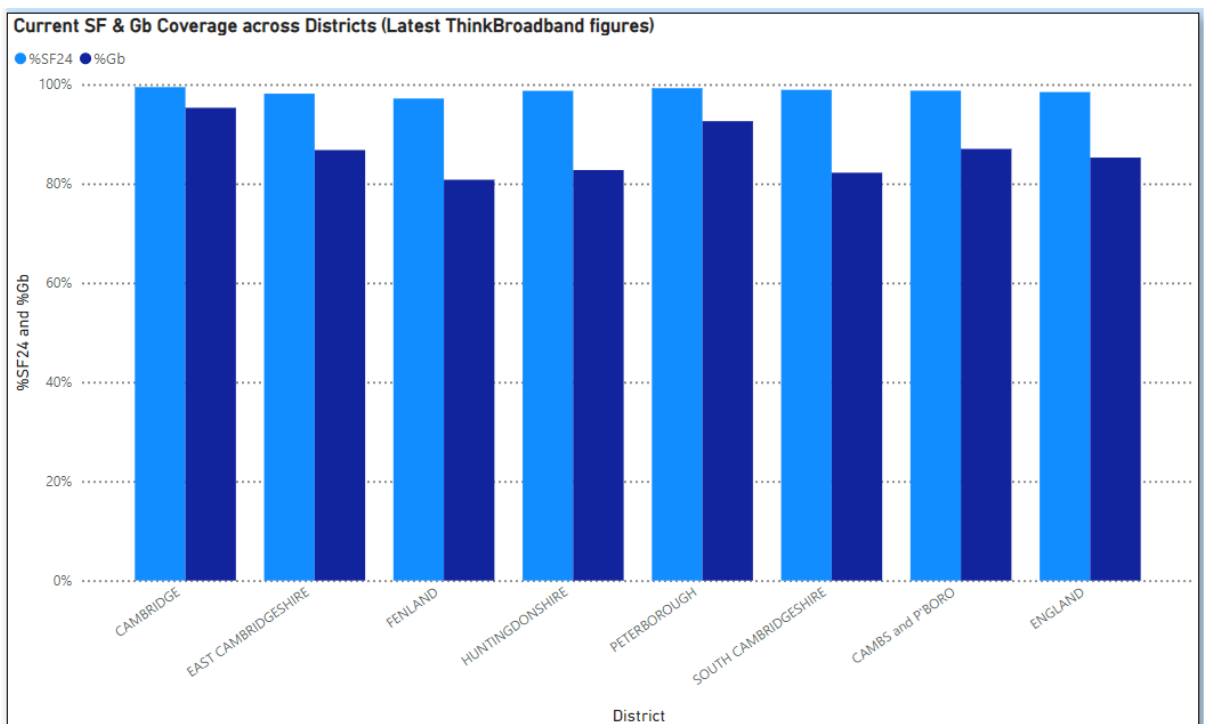
*UK Government target for gigabit broadband to be available to 85% of the UK by 2025 and nationwide by 2030.

- 3.3. Since the strategy was launched in April 2021, the region's innovative barrier-busting approach has led to a significant increase in active full fibre providers, growing from 5 to 14. Over 43,000 street works permits have been submitted, accounting for 43% of all street work applications, reflecting the intense activity in expanding broadband infrastructure.
- 3.4. Building on the programme's success, the Department for Science, Innovation and Technology (DSIT) selected Cambridgeshire and Peterborough as one of the first areas to receive further investment under Project Gigabit. The initiative is bringing an investment of around £45m into the area to support the delivery of full fibre broadband to approximately 45,000 premises. Delivery is underway and the first customers have now been connected with completion

expected by 2027.

3.5. In addition to supporting the government’s Project Gigabit delivery, 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.

3.6. Connecting Cambridgeshire continues to collaborate with communities and suppliers in areas without planned Project Gigabit or commercial coverage. We’re working with providers to explore alternatives as well as lobbying government on both urban and rural voucher schemes. The Rural Gigabit Voucher scheme was paused by the government at the start of Project Gigabit procurement and has yet to re-open.



3.7. 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 are regularly updated 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. A key milestone in the 2021-25 strategy was the signing of the first commercial agreement to facilitate a pilot deployment of 13 small cells on street lighting columns. Work to achieve this was complex as the existing county council PFI contract prevented telecoms equipment being deployed. The programme worked around these issues in collaboration with the Street Lighting team. In parallel, Connecting Cambridgeshire agreed new heads of terms with the incumbent Street Lighting Service Provider to amend the PFI allowing telecoms equipment to be installed in the longer term, meaning continued improvements to mobile connectivity can be supported. Once the PFI changes are finalised, this will allow street lighting assets to be made available to all small cell providers and MNOs.
- 4.2. Connecting Cambridgeshire secured £220K funding from the Government's Smart Infrastructure Pilots Programme competition to design and deploy Smart Poles in the region. This project is developed to support the region's digital ambitions, making it easier and more cost-effective to set up telecoms equipment to enhance connectivity. Future-proofing street furniture to meet anticipated needs will play a key role in reducing costs and timeframes to deploy telecoms equipment and speed up investment. Installing Smart Poles will improve connectivity by providing local authorities with a platform to deploy their smart city infrastructure.
- 4.3. The pioneering 'Dig Once' policy has continued to ensure the provision of fibre ducting in new transport infrastructure schemes and has made this ducting available on a commercial basis - bringing measurable benefits for the economy, local communities, and the environment. To date, over 21km of additional fibre ducting has been installed or is planned to be installed during the construction of new road and cycleway schemes. This has already resulted in savings of over 20 tonnes of CO2 emissions in relation to materials use alone over three years.

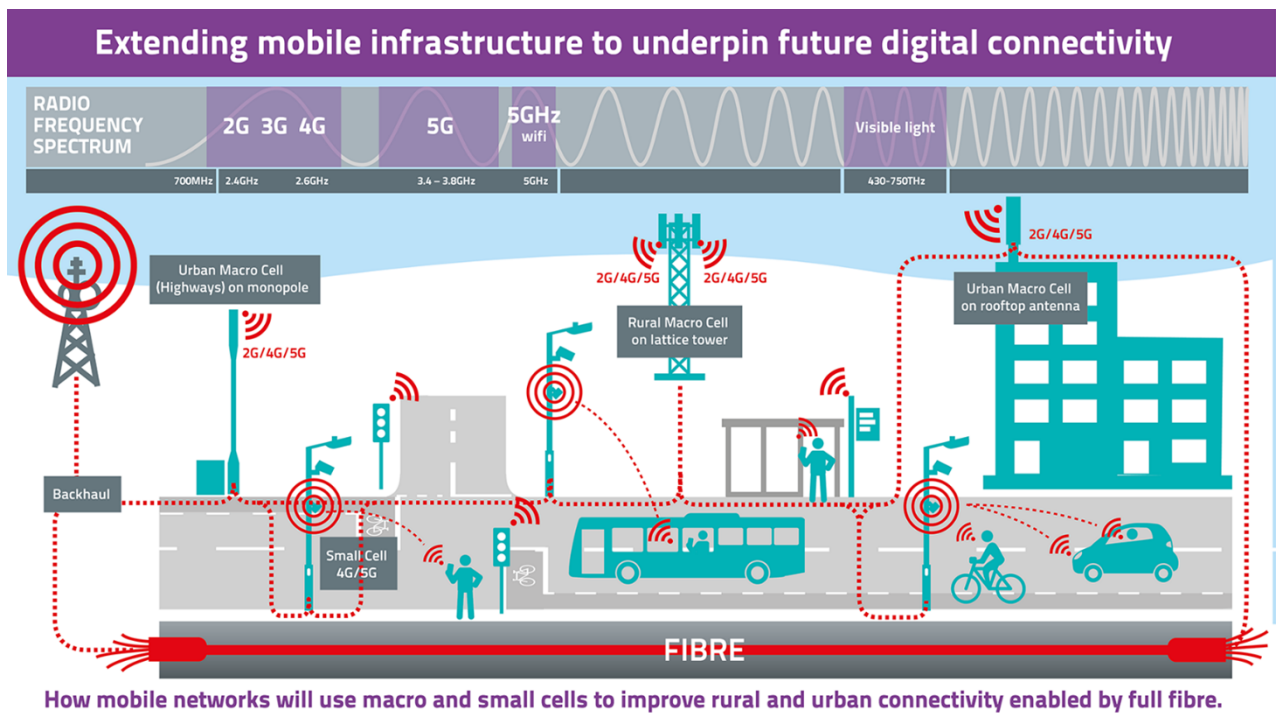
5. Mobile connectivity

- 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. The first commercial Small Cell Licence Agreement has been signed as a pilot to assess the long-term sustainability of deploying 4G small cells on the region's street lighting assets. Small cells will play a fundamental role in boosting mobile capacity in the region.
- 5.3. 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 not-spots' in market town centres, business parks, major roads and train stations. Metricell, conducted a comprehensive benchmarking project to assess the wireless mobile

network coverage and quality of service across Cambridgeshire and Peterborough. Data from the surveys cross-referenced with existing Ofcom data has been used to draw up a list of connectivity gaps including residential areas, business/research parks, roads, and 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. The list highlights a wide range of coverage issues and has been shared with mobile network operators, who are working with our Enabling Digital Delivery team to proactively find solutions.

5.4. 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.



6. 5G Technology

- 6.1. Connecting Cambridgeshire delivered a demonstration of Open RAN (Radio Area Network) technology at Soham Village College in collaboration with AWTG as part of their Future RAN competition-to show how it can be used to improve mobile connectivity. The demonstration allowed students to be immersed in an educational Augmented Reality experience featuring Sir David Attenborough and was funded entirely by DSIT.
- 6.2. The programme successfully bid for the £9.4m Cambridgeshire Open RAN Ecosystem (CORE) project funded by government and commercial organisations to trial 5G Open RAN in Cambridge. This includes £500k to develop an Augmented Reality experience to demonstrate the opportunities created by this technology.

7. Smart Workstream

- 7.1. The programme's smart workstream is supporting the Greater Cambridge Partnership to deliver an autonomous vehicle trial in Cambridge. The project kicked off in April 2023 and was re-scoped due to a change in technology provider in February 2024. It will now deliver 4 electric, self-driving buses on two routes, one at the University of Cambridge's West Cambridge Campus and the other between Babraham and Trumpington Park & Rides via the Cambridge Biomedical Campus (CBC). The University route is expected to run from autumn until the current close of the project in March 2025. Ancillary services of a private 5G network and EV charging infrastructure will also be installed as part of the project.
- 7.2.
- 7.3. 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.
- 7.4. A number of our IoT solutions make use of the low power, long range sensor network called LoRaWAN. LoRaWAN coverage has been expanded to support the deployment of sensors by installing gateways in locations including Ely, Soham, St Neots, Kimbolton and Alconbury, including at New Shire Hall. There are further potential deployments in Cambourne and Peterborough.
- 7.5. The programme supported the installation of 5 EarthSense Air Quality (AQ) sensors in March and Wisbech. These devices are allowing trends to be identified and providing the opportunity to assess the impact of various changes in these locations.
- 7.6. Building on the Mobility Monitoring Network which was established in 2022, further traffic sensors have been installed to support teams across the county to obtain a more granular understanding of road use. This includes installation on sensors in Cambridge with the capability to capture and analyse 'near-miss' scenarios on specific road settings such as junctions or roundabouts.

8. Access and Inclusion

- 8.1. Supporting increased access to digital connectivity and inclusion is a key objective for the Cambridgeshire & Peterborough Digital Connectivity Strategy (2021-2025). To date this has focussed on public access Wifi provision, digital connectivity infrastructure for social housing and signposting to digital inclusion opportunities for residents.
- 8.2. Over the past year, the digital inclusion work of the Connecting Cambridgeshire programme has expanded significantly through several key initiatives:
- Based on insights from the 'Bridging the Digital Divide in Cambridgeshire and Peterborough - State of Digital Inclusion Report' report released in late 2023, we have created a Digital Inclusion Delivery Plan for 2024/25. This plan outlines six core principles and twelve key ambitions to guide our efforts in enhancing digital inclusion.
 - We have increased our interactions with cross-sector stakeholders, community groups, and individual residents. This engagement has deepened our understanding of the needs and goals of digitally excluded residents and reinforced our role as a support system for local organisations.
 - We have established a crucial partnership with the Chambers of Commerce to develop and implement a 'Digital Skills Plan.' This initiative aims to bridge the digital skills gap and help residents pursue tech-related career pathways in local employment.
 - Together, we are delivering the Cambridgeshire Digital Partnership to enhance digital inclusion across the region.
 - We are working with Cambs Acre to advance place-based digital inclusion in rural communities through their network of village agents.
 - We have developed a partnership to create a localized digital inclusion programme and forum tailored to the Peterborough area.
 - We are collaborating with the Good Things Foundation to promote the National Digital Inclusion Network and encourage local partners to join.
 - We are taking a collaborative approach to integrating social prescription and digital inclusion for health and wellbeing, working closely with the University of Cambridge, Health Watch, and NHS Integrated Care Services.
 - In partnership with Cambridgeshire County Council's Adult Social Care team, we are piloting a 'critical friend' approach to incorporate digital inclusion considerations into digital transformation efforts.
 - We are actively engaging with communities concerned about the Digital Switchover, planning a comprehensive communication campaign, and developing an engagement plan and support workshops for businesses.

- We are identifying new ways to enhance digital inclusion, including launching a volunteering scheme, creating an internal staff training module, and establishing digital hubs in rural areas for holistic local support.

9. Digital Connectivity Strategy Refresh

9.1. The programme has delivered a number of successes as listed in Appendix B. Key highlights include:

- Full Fibre broadband coverage across the region now exceeds the national average and we have already achieved the government's gigabit capable broadband target of 85% coverage over a year early.
- Almost £10 million government funding has been secured to lead and trial new telecoms technology.
- A year-long work plan aiming to bridge the digital divide and ensure that all residents have the access, skills, and confidence to benefit from digital connectivity has been unveiled for Cambridgeshire and Peterborough.

9.2 However, 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, typically in the most remote and rurally isolated areas.

9.3 2024/25 is the final year of the current funding from CPCA for Connecting Cambridgeshire Programme therefore a new digital connectivity strategy for the next 4 years has been developed. This is to ensure that the region continues to exceed the ambitious targets set by central government on the availability and accessibility of digital connectivity across the UK.

9.4 The new Digital Connectivity Strategy for the period 2025 -2029 will be a component of the Combined Authority's Local Transport and connectivity Plan (LTCP) and will build on the foundations of this multi-agency programme, which has been led by the Combined Authority since 2017.

9.5. This strategy will ensure that the Combined Authority can deliver its ambition of outstanding and much needed digital connectivity, supporting effective public service delivery, thriving communities and sustainable business growth. This will build on previous investment in digital infrastructure to develop connected communities.

9.6. The Connecting Cambridgeshire 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.

9.7. This new strategy aims to promote and encourage inclusive access to online public and community services and has been written to align with and

complement not only the Local Transport and Connectivity Plan but also other national, organisational and partner strategies including Local Economic Recovery Strategy, Employment and Skills Strategy, the government's Wireless Infrastructure Strategy and 5G supply chain diversification strategy. The strategy will also supplement other County, City and District wider strategic frameworks and ambitions to help people become capable of using and benefiting from the internet.

- 9.8. It is proposed that the revised strategy and programme will cover three themes:
- **Digital Infrastructure** – ensuring that digital connectivity is available to all communities across Cambridgeshire and Peterborough to meet the connectivity needs of residents and businesses. This will focus on future-proof full fibre, 4G and 5G as well as other advanced wireless communication solutions.
 - **Innovation** – supporting and demonstrating the capabilities of innovative solutions to offer a wide range of benefits for residents, visitors, and businesses. Encouraging commercial and government investment to drive innovation and enable data-driven decision-making in the region.
 - **Inclusion** – empowering our residents and businesses to develop the skills and confidence they require to make the most of the digital connectivity available to them and raising awareness of the benefits of being online. Working collaboratively to promote access to affordable connectivity and devices.
- 9.9. Digitalization and connectivity can accelerate carbon reductions and support a greener, low-carbon future by enabling smarter and more efficient use of energy and resources. With this in mind, the programme is ~~to~~ ^{to} 5G to benefit to net-zero greenhouse gas emissions and a more sustainable economy.
- 9.10. The future programme vision is to make Cambridgeshire and Peterborough the best digitally connected region in the UK supporting effective public service delivery, thriving communities and sustainable business growth.
- 9.11. A digital connectivity strategy is not just about digital infrastructure or technology adoption but also about leveraging digital capabilities to drive growth, efficiency, innovation, and competitiveness in today's interconnected world. Its absence could severely limit the combined authority's ability to adapt to changing public expectations.

The full draft strategy is enclosed as Appendix B - Digital Connectivity Strategy 2025-2029

Useful links

Mobile UK [The Case for Local Authority Digital Champions](#)

[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 \(connectivityuk.org\)](#)