Connecting Cambridgeshire Digital Connectivity Strategy
for Cambridgeshire and Peterborough 2018-2022

Digital Connectivity Review 2018-2019

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Foreword

James Palmer, Mayor of Cambridgeshire & Peterborough and Councillor Steve Count, Leader of Cambridgeshire County Council.

Mayor of Cambridgeshire & Peterborough, James Palmer

I am delighted that the Cambridgeshire & Peterborough Combined Authority (CPCA) has already made good progress towards our commitment to delivering outstanding digital connectivity that will support the growth of our local economy and improve the day to day lives of our residents. A strong mobile and broadband network together with free public access Wifi is key to enable us to remain competitive in the national and international marketplace. This strategy supports the Combined Authority's commitments to double the size of the economy, deliver outstanding connectivity, make public services more responsive to people's needs and improve people's quality of life.

Cambridgeshire County Council Leader, Councillor Steve Count

Cambridgeshire is a leading digital county. Fast, reliable internet access is vital for our businesses to be able to compete, for our communities to thrive, and for people to access council and health services online.

Digital connectivity is a 'game changer' so we must plan ahead to increase the availability of gigabit services for homes and businesses across the county by using public sector assets innovatively and creating conditions that make it commercially viable for full fibre rollout.

Digital Connectivity Overview

Cambridgeshire and Peterborough is a leading digital county with a bold vision for investing in future facing connectivity to underpin the region's growth and prosperity, deliver public services and support businesses and communities.

A new *Delivering Digital Connectivity Strategy 2018–2022* was launched in July 2018 to significantly improve mobile, broadband and public Wifi coverage, whilst securing future proof full fibre and 5G networks.

This Digital Connectivity Review provides an annual progress report on the work underway to achieve the Strategy's ambitions over the next four years.

In addition to significant private sector investment, the wide-ranging plans to improve the region's digital connectivity build upon funding from Cambridgeshire County Council and Peterborough City Council, £5.6million investment from Cambridgeshire & Peterborough Combined Authority, together with more than £14m in Government and EU grants.

With Combined Authority investment, the innovative Connecting Cambridgeshire digital programme, led by

Cambridgeshire County Council, has been expanded to:

- Stimulate increased commercial investment and facilitate faster telecoms infrastructure deployment
- Improve mobile coverage, including preparing for forthcoming 5G services
- Increase the full fibre footprint and support digital infrastructure innovation
- Increase the provision of public access Wifi, particularly in market towns and village halls.

The plan builds upon Connecting Cambridgeshire's strength in delivering leading edge digital connectivity, particularly the successful rollout of superfast broadband.

> " Digital connectivity is now a utility, and modern life is increasingly impossible without it. Connectivity drives productivity and innovation, and is the physical underpinning of a digital nation. "
>
> UK Government Digital Strategy 2017

Superfast broadband (24mbps +)

- Phase 2 - reached 96% homes and businesses
- Phase 3 – reached 97% early 2019
- Phase 4 – targeting >99% by end 2020

Full Fibre

- Revised full fibre target to achieve over 30% coverage by 2022
- Increasing use of Fibre to the Premise (FTTP) technology
- Developing fibre assets and connecting public buildings

Mobile 2G - 4G - 5G

- Working with mobile operators to improve poor coverage affecting businesses and communities
- Targeting better coverage of A and B roads and rail routes by 2022
- Planning ahead for early deployment of 5G mobile services

Public Access Wi-Fi

- Widespread free Wifi in public buildings and open spaces
- Expanding Wifi provision in market towns, village halls and community buildings

Smart Programme

- Using technology and data to develop smart solutions
- Smart Cambridge – Helping to tackle urban challenges such as transport and air quality
- Smart Places Initiative – extending the programme to support growth of our market towns

Enabling Digital Delivery

- Facilitating delivery of better mobile and fibre connectivity

Full Fibre

Full Fibre targets

- Revised full fibre target to achieve over 30% coverage by 2022
- Increasing use of Fibre to the Premise (FTTP) technology
- Developing fibre assets and connecting public buildings

Connecting Cambridgeshire has set a challenging new target to achieve over 30% full fibre coverage across Cambridgeshire and Peterborough by 2022 to support it the county's ambitions for digital connectivity.

The full fibre target is part of plans agreed in March 2019 by Cambridgeshire County Council, including innovative use of council assets to deliver better connectivity.

Full fibre networks support the fastest, most reliable internet access - capable of gigabit speeds, which are future-proof and provide the backbone for 4G and future 5G mobile services.

> Our forward thinking approach to extending full fibre coverage aims to put the county at the forefront of the UK's digital development and supports the Government's ambition to reach 50% of the country with fibre by 2025.
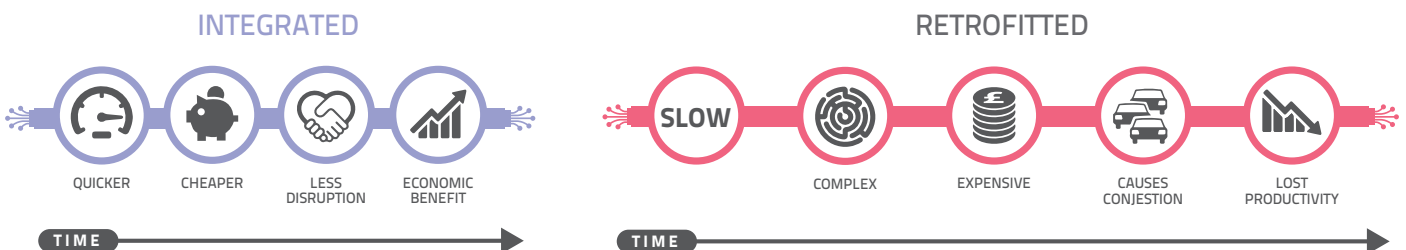
Councillor Ian Bates, Chair of Cambridgeshire County Council's Economy and Environment Committee.

Fibre coverage in Cambridgeshire and Peterborough is above the national average having reached over 11% by May 2019. By 2022, the Connecting Cambridgeshire programme aims to increase the county's fibre footprint by:

- **Using Fibre to the Premise (FTTP) technology** to complete the superfast broadband rollout, to reach over 99% of homes and businesses.

- **Maximising commercial investment** - proactively removing barriers to telecoms infrastructure through the Enabling Digital Delivery (EDD) team.

- **Using council assets to support better connectivity** such as making existing fibre ducting under the Guided Busway and cycleways available on a commercial basis.

- **Upgrading over 100 public buildings** with full fibre to support gigabit-capable services, in rural areas of Huntingdonshire, East Cambridgeshire and Fenland.

- **Delivering the benefits of integrating fibre ducting** in all new transport infrastructure schemes as part of leading edge Council policies.

- **Launching an innovative joint venture** between the University of Cambridge and Cambridgeshire County Council to make assets available to expand fibre networks, and provide a 'neutral host model' for the region.

The full fibre plans can be achieved within the Connecting Cambridgeshire programme's budget following successful bids for over £14m additional EU and Government funding, together with over £80m private investment in full fibre networks by commercial providers.

The benefits of integrating fibre ducting in transport infrastructure schemes

INTEGRATED

- QUICKER
- CHEAPER
- LESS DISRUPTION
- ECONOMIC BENEFIT

TIME →

RETROFITTED

- SLOW
- COMPLEX
- EXPENSIVE
- CAUSES CONJESTION
- LOST PRODUCTIVITY

TIME →

Enabling Digital Delivery (EDD)

Connecting Cambridgeshire is among the first in the country to set up a dedicated Enabling Digital Delivery (EDD) team that is proactively removing barriers to the rapid delivery of future proof digital connectivity across the county, making best use of public sector assets and attracting private sector investment.

Launched in July 2018, the multi-faceted EDD team is taking action to recognise and resolve the myriad issues that can hold up the delivery of fixed and mobile infrastructure.

EDD has rapidly established itself as the first 'port of call' for network providers and telecoms operators, and its work is already making an impact, including:

- Setting up an Enquiries Register to manage and resolve 'real time' issues affecting infrastructure delivery including complex legal agreements, wayleaves, streetworks and permits, infrastructure problems and planning.

- Trialling the DCMS National Streetworks Toolkit by liaising between CityFibre and Cambridgeshire County Council's Streetworks team to support the £20m fibre rollout in Cambridge City.

- Supporting FTTP deployment by Hyperoptic to social housing with Cambridge City Council's Housing Department.

- Promoting the use of public sector assets by telecoms providers to support digital connectivity delivery across the region.

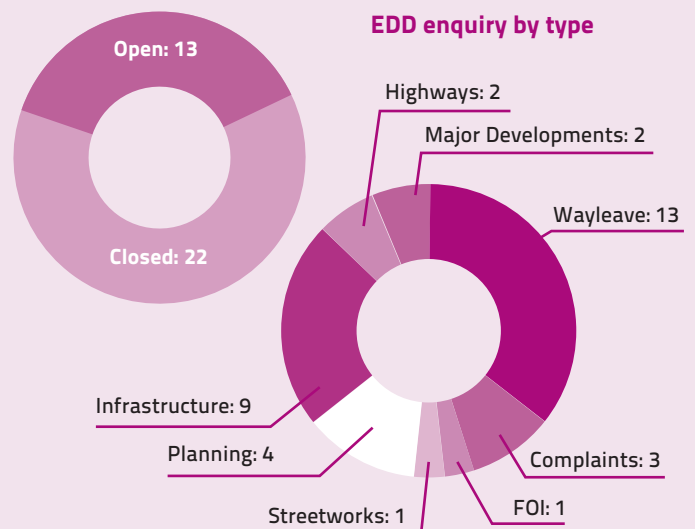- Spearheading the new policy for all Cambridgeshire County Council's major

> " Your proactive engagement with CityFibre – setting up effective meetings – with the Cambridgeshire Streetworks team and the University of Cambridge Granta Network, has contributed immensely to the mobilisation of our £20M FTTH project in Cambridge. "
>
> Patrick Haynes, City Development Manager, CityFibre

infrastructure projects (roads, footpaths, cycleways etc) to include fibre ducting in the design, build and budget, and incorporated by partner agencies.

- Working across local authority boundaries to streamline existing processes and procedures that can impact on the rapid deployment of future facing digital technologies, and develop best practice planning guidance for mobile operators and telecoms providers.

- Gaining a national profile and leading the way for other programmes to follow.

Number of EDD Cases July 2018 - May 2019

Open: 13
Closed: 22

EDD enquiry by type

Highways: 2
Major Developments: 2
Wayleave: 13
Complaints: 3
FOI: 1
Streetworks: 1
Planning: 4
Infrastructure: 9

> " Your knowledge of the market, the practicalities around installation and the providers themselves has enabled us to move the project forward much more quickly and smoothly than would otherwise be the case. "
>
> David Greening, Head of Housing, Cambridge City Council

Up to the end of May 2019, 35 support requests have been registered; of which 22 have been resolved, with active management in place to resolve all others.

Future-facing Digital Connectivity for Cambridgeshire and Peterborough

Cambridgeshire and Peterborough is a leading digital economy with a bold vision to optimise private and public sector investment in future facing connectivity to underpin the region's growth, deliver public services, and support businesses and communities.

Work is underway to deliver our Digital Connectivity Strategy 2018 -2022, which sets out ambitious plans to improve fibre broadband, public access Wifi and mobile coverage across the region.

This map shows current and potential sites for full fibre networks, through private investment and public sector building upgrades, as well as Public Access Wifi locations across the county.

Ambitious delivery plans

- Superfast broadband >99% by end of 2020
- Mobile Coverage – 2G -4G -5G
- Full Fibre >30% by 2022
- Public Access WiFi

Collaborating for success

- Combined Authority and local councils
- Telecoms providers and mobile operators
- Businesses and communities
- Academia

Strong digital demand

- Rising take-up: Superfast Broadband >63%, Full Fibre >33%
- Gigabit vouchers for businesses to access new fibre networks

Innovation

- Digital Innovation Corridors including a 40Km duct and fibre network from St Ives to Linton, digital infrastructure for the new A428 and off road routes
- Cambridge and Peterborough in UK's top 10 Smart Cities
- Cambridge is the #1 UK city for patent applications

Thriving business communities

- 43,874 businesses of which the majority are SMEs
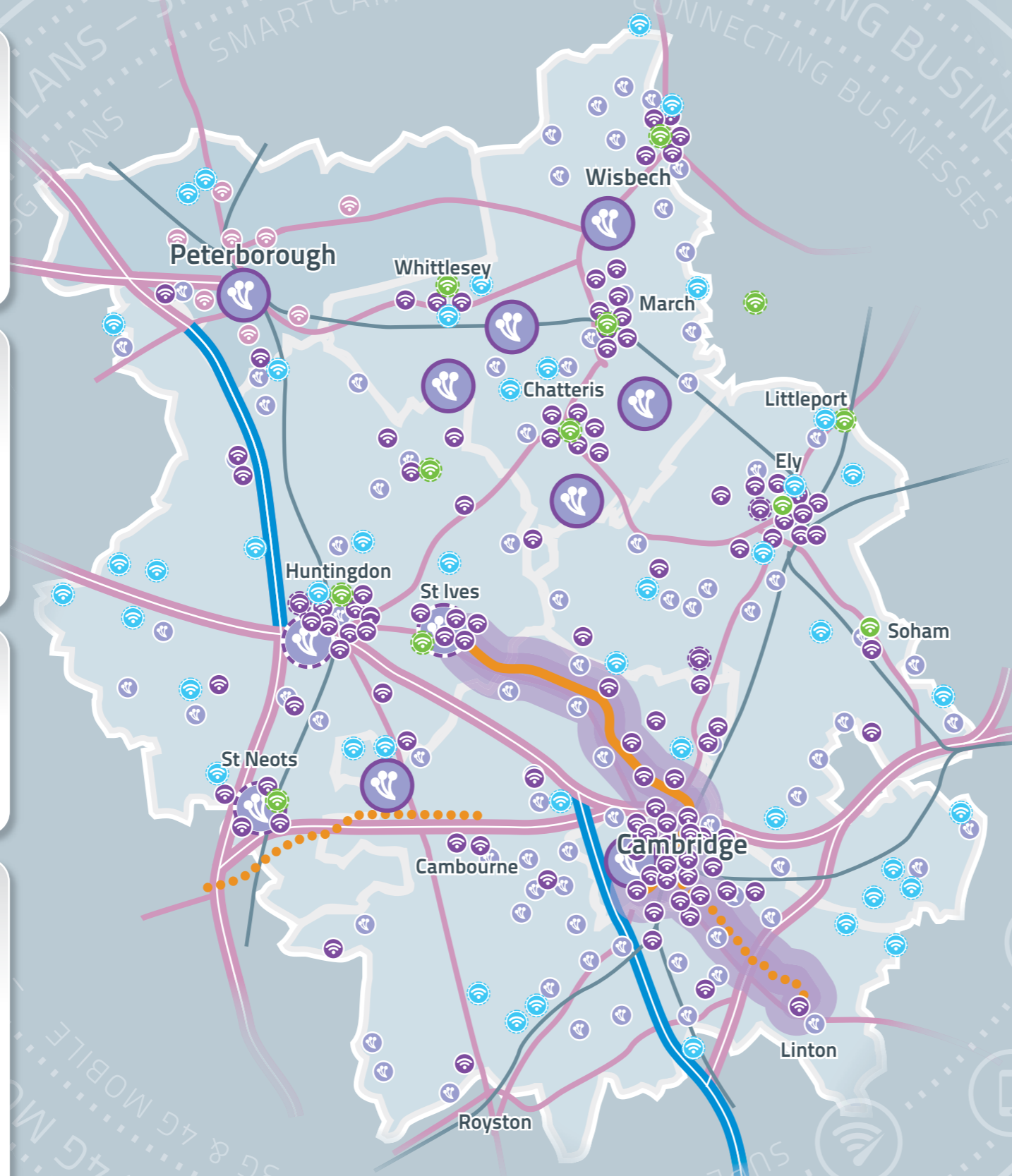- 4,700 knowledge-intensive companies in the Cambridge cluster

Significant funding and commercial investment

- Over £14m additional Government, EU and Local Authority funding supporting the delivery of leading edge digital infrastructure
- More than £80m for full fibre networks including: BT, CityFibre, Cambridge Fibre Networks, County Broadband, Gigaclear, Grain, Hyperoptic, Virgin Media
- Virgin Media 8GB trials in Papworth
- Gigabit-capable networks including new developments at Alconbury, Northstowe etc

Fastest growing region

- Fastest growing economy in the UK
- GVA growth of 84.6% (2001-2016)
- International trade increasing by £300m by 2021
- Employment forecast - 90,000 new jobs by 2036
- Population forecast to rise to >1 million by 2036
- Combined Authority target 29,000 new homes by 2021, rising to 100,000 by 2037

Key

- Public Sector Building fibre upgrade locations
- Private sector investment in fibre networks – announced/underway
- Private sector investment in fibre networks – under consideration
- CambWifi
- CambWifi Coming Soon
- Market towns Wifi
- Market towns Wifi -in planning or under consideration
- Village/Community halls in planning or under consideration
- Open+ Libraries
- Digital Innovation Corridors

Concept map, not to scale.

Map labels: Peterborough, Wisbech, Whittlesey, March, Chatteris, Littleport, Ely, Soham, Huntingdon, St Ives, St Neots, Cambourne, Cambridge, Linton, Royston

Superfast broadband rollout

Superfast broadband (24mbps +) targets

- Phase 2 - reached 96% homes & businesses
- Phase 3 – reached 97% early 2019
- Phase 4 – targeting >99% by end 2020

The Connecting Cambridgeshire superfast broadband rollout, led by Cambridgeshire County Council, is extending fibre connectivity to homes and businesses that would not be able to get it otherwise.

The programme reached its target of delivering superfast broadband access to over 97% of premises across Cambridgeshire and Peterborough in March 2019 (nine months early) and is aiming for more than 99% coverage by the end of 2020.
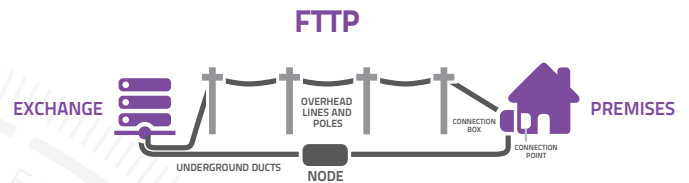
The county has some of the highest take up figures in the country, reaching over 63% superfast and more than 30% full fibre by the end of April 2019, and rising. The contract with BT includes a 'clawback clause' for take up over 20%, which means an additional funding stream of £10m+ has been made available

to reinvest in extending the rollout, together with grants from the Government's Rural Broadband Infrastructure Fund and the European Union.

Phase three of the rollout is underway, phase four has been procured and is being planned to reach remaining areas over the next two years. This includes extending the fibre network to 5,300 additional premises in harder to reach rural areas.
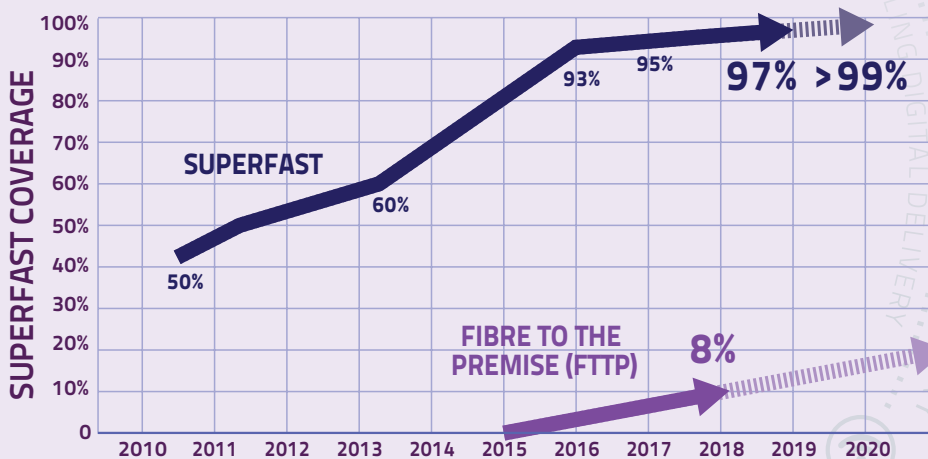
Fibre to the Premise (FTTP)

Increasingly, Fibre to the Premise (FTTP) technology is being used to connect remaining premises to the network, which means households and businesses can upgrade to faster, more reliable speeds of up to 300Mbps, now or in the future.

With FTTP, the fibre optic cable runs directly from the telephone exchange to the property, either via underground ducts or overhead cables on telegraph poles, to a connection box. Peterborough and Fenland already have over 20% FTTP.

Superfast progress

Take-up Campaign

Connecting Cambridgeshire ran a successful Superfast Broadband Take-Up campaign in early 2019, funded by the Government, to highlight the availability of superfast (and faster) fibre broadband and remind residents that they need to upgrade to get it.

Mobile – 2G-4G-5G

Mobile & 5G targets

- Working with mobile operators to improve poor coverage affecting businesses and communities
- Targeting better coverage of A and B roads and rail routes by 2022
- Planning ahead for early deployment of 5G mobile services

Mobile coverage for voice and data (2G and 4G services) across parts of Cambridgeshire is variable which is causing widespread concern amongst businesses and communities and is seen to be negatively impacting local economic growth.

Connecting Cambridgeshire is supporting improvements to network coverage so that people can make reliable mobile phone calls and use 4G across the whole geography of the county, including A and B roads, and rail services by 2022.

To support this, Cambridgeshire County Council commissioned a technical mobile phone coverage survey for the Cambridgeshire and Peterborough area, which took place during February and March 2019, covering a range of locations including roads, tourist attractions, parks and rail routes.

The survey findings are being analysed in conjunction with the latest Ofcom data to identify areas of poor coverage, as the baseline for the programme's mobile coverage improvement plan. This data will inform discussions which are underway with Ofcom, mobile operators, landowners, businesses and communities to improve access for infrastructure and broker solutions, with an initial focus on 'notspot' areas.

Working Together

Connecting Cambridgeshire is building relations with mobile operators and our dedicated Enabling Digital Delivery team is working to resolve barriers that prevent mobile connectivity from being improved.

Mobile UK, the trade association for the UK's mobile network operators cited Connecting Cambridgeshire as a case study in its flagship report 'Councils and Connectivity: How local government can help to build mobile Britain', launched at Westminster in September 2018.

BUILDING MOBILE BRITAIN

" Building Mobile Britain relies on strong partnerships and local Government has a vital role to play in delivering this goal. Our report, Councils and Connectivity, outlines how proactive local government leadership, planning and the sharing of ideas can enable and unlock opportunities to achieving a world-class connected economy. "

Gareth Elliott, Head of Policy and Communications, Mobile UK

Public Access Wifi

Public Access Wifi targets

- Widespread free Wifi in public buildings and open spaces
- Expanding Wifi provision in market towns, village halls and community buildings

Connecting Cambridgeshire is looking to expand free public access Wifi services so that more people can get online in public buildings, open spaces and retail centres around the county.

The programme is delivering a Public Access Wifi Strategy for cities, market towns and rural or sub-urban areas across Cambridgeshire and Peterborough, and is working towards CambWifi availability across all areas.

> We want to see greater equity of free public access to Wifi, which is why we are keen to extend free public access across our Market Towns to follow the very successful projects that are already in place. This scheme will allow local people and visitors to get online in public buildings and open spaces across our area, so that they can be connected wherever they are.

James Palmer, Mayor of Cambridgeshire & Peterborough

CambWifi is already available at around 150 sites across Cambridgeshire including libraries, leisure centres, community centres, children's centres, sheltered housing schemes, and council buildings, and also in open spaces in Cambridge.

The secure, trusted network is free and is simple to join via a single sign on and registration. It supports digital inclusion and the local economy: allowing people to access public services, shop or pay bills online and keep in touch with family and friends without having to travel.

The programme is liaising with District and Town Councils to support emerging Market Towns Masterplans to increase Wifi services in market towns so that residents, traders and visitors can access information and make payments online.

Public access Wifi is planned to be delivered in Fenland market towns from summer 2019, followed by Huntingdonshire and East Cambridgeshire market towns by the end of 2019.

East Cambs District Council is piloting the provision of public access Wifi in Ely and Soham town centres via a local provider with the support of the programme, which has brought a positive impact for the local economy.

Plans are also being developed to extend public access Wifi provision to some village halls and community buildings, following a survey by CambsACRE to assess where free public access Wifi would help local communities to support their activities.

The map on the centre pages shows current and planned Public Access Wifi locations across Cambridgeshire and Peterborough.

CambWifi: working towards CambWifi network availability across all areas

- Trusted network
- Single sign on and registration
- Seamless connection across the CPCA area
- GDPR compliant
- Content filtered for safe access

CambWifi Free

smart PLACES

The Smart Places Initiative is exploring how data and emerging technology can be used in market towns to help to address common challenges such as transport, connectivity and air quality.

It builds upon the innovative work of the Smart Cambridge programme, led by Connecting Cambridgeshire, which has helped to make Cambridge one of the top ten smart cities in the country.

The Smart Places team is working in collaboration with communities, local authorities, town councils, businesses and academia to support the Cambridgeshire & Peterborough Combined Authority's Masterplans for market towns.

Smart St Neots

St Neots residents welcomed the opportunity to share their views to help find 'smart' solutions to tackle some of the town's challenges.

More than 250 people took part in a series of events and posted their feedback on an interactive map to highlight key areas where smart technology could help such as congestion, public transport, community information, and air quality sensors.

The next steps will see the Smart Places team create project proposals for the Cambridgeshire & Peterborough Combined Authority to support on-going and planned MasterPlan works for St Neots.

> " St Neots is leading the way for our new Smart Places Initiative...We've had lots of great suggestions and look forward to working with the community and local councils to take them forward. "

Cambridgeshire County Councillor David Wells, Huntingdonshire District Councillor for St Neots (East) and Chairman of the St Neots Masterplan steering group.

Digital Connectivity Champion

Cambridgeshire County Councillor Ian Bates won a national Technology & Digital Award in 2018 for his work championing digital connectivity across the county.

Cllr Bates chairs the County's Economy and Environment Committee, which oversees the Connecting Cambridgeshire digital connectivity programme. The LGiU and CCLA Councillor Achievement Award recognised his support for the transformational effect of digital connectivity for rural communities, business growth, and smart energy.

Connecting Businesses

Full fibre networks mean businesses can prepare for gigabit-capable connectivity, so they can access speeds of up to 1,000 Mbps in future.

More than 100 Cambridgeshire and Peterborough businesses have successfully applied to install full fibre gigabit capable connections through the Government's Gigabit Broadband Voucher Scheme.

Neighbouring businesses are being encouraged to pool their vouchers together with nearby residents to share the installation costs using local full fibre broadband suppliers. A new Rural Gigabit Voucher Scheme was also launched in May 2019 with additional funding for rural residents to install gigabit-capable broadband as part of a group project.

Find out more at:
gigabitvoucher.culture.gov.uk

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