

Oxfordshire Digital Infrastructure Strategy and Delivery Plan

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Confidentiality of this document: Public

Statutory Bodies, Departments, Private Sector, and Stakeholders: Cross-Cutting;

- Oxfordshire County Council, specifically Communities Directorate/Highways
- Oxfordshire Planning Authorities
- Oxfordshire Growth Board
- Department for Digital, Culture, Media, and Sport
- Ministry of Housing, Communities, and Local Government
- Local Government Association
- Association of Directors of Environment, Economy, Planning, and Transport
- OxLEP
- England’s Economic Heartland
- Fixed Network Operators
- Mobile Network Operators
- Oxfordshire Members of Parliament
- Oxfordshire Councillors (County and Districts)
- Oxfordshire Businesses
- Oxfordshire Residents

Executive Summary

The Oxfordshire Digital Infrastructure programme has delivered a step-change in digital connectivity for citizens and business in Oxfordshire, taking availability of superfast broadband to over 98% from 69%. However, as the volume of internet traffic is doubling every two years, there is a UK-wide drive to build the next generation of internet access based on Full Fibre rather than Fibre to the Cabinet. Equally mobile data traffic is increasing by c 43% each year and the next generation of mobile, 5G is beginning to be rolled out at pace.

There are many drivers increasing demand for ever-faster connectivity, orientated around two key areas – the move to cloud storage and applications, and huge growth in video-on-demand content. In tandem though, the convergence of IoT (Internet of Things) and AI (Artificial Intelligence) is transforming service delivery and business models, creating what is increasingly understood as the 4th Industrial Revolution. With this in mind, the focus of the Department for Digital, Culture, Media, & Sport (DCMS) has increasingly moved from superfast broadband to focus on full-fibre connectivity and 5G mobile data. The only way this rapid growth in bandwidth requirements can be accommodated is with full-fibre broadband which

offers speeds of 1Gb/s today and capable of much higher speeds in the future. This same fibre is also the backbone for backhauling 5G mobile.

There are few areas in the UK where the importance of world-class digital infrastructure is as pronounced as in Oxfordshire. The county itself, and the Oxford to Cambridge Arc is the home to an economic growth engine for the UK, and this is predominantly founded on high Gross Value-Added businesses in aerospace, advanced motor engineering, biosciences, space technologies, electronics & sensors, and Life Sciences. We also have a workforce with above average skills, and of course excellence in academia. It is reasonable to compare this environment with the likes of Silicon Valley, Beijing, Los Angeles, Tel Aviv, and other world centres introducing revolutionary technical change. These are the locations Oxfordshire businesses compete with, and every one of these top tech hubs already have world class digital connectivity.

Whilst this critical infrastructure will secure business competitiveness and growth, it will also have a positive impact in assisting with the actions required to mitigate climate change. Fewer car journeys will need to be made as increasing numbers of people will be fully productive working from home, and when travel is required, fully connected vehicles and interactive signage will optimise journeys, reducing congestion.

Vision

Our vision is for Oxfordshire to be enabled with smart infrastructure, extending the smart city concept out into our heartland. This means not only ensuring all residential premises and businesses have gigabit capable connectivity, but the infrastructure fabric of our highways, signage, street furniture, public buildings, public transport, cycle paths, green spaces, medical facilities etc are connected, integrated, and enabled with IoT applications. This becomes particularly powerful when the data collected can be interrogated and combined with Artificial Intelligence to provide predictive assessments associated with health, travel, environment, and economic factors. This is an important contribution to our mission of creating thriving communities and a thriving economy in a sustainable and environmentally friendly manner. Examples include;

- **Intelligent Streetlighting – central management can allow detailed control of lighting, saving money whilst providing flexibility**
- **Strategic planning for Connected Autonomous Vehicles by way of 5G connectivity to accurately control the highways network**
- **A raft of sensors to measure air quality, spot fly-tipping, manage efficient refuse collections, measure noise pollution etc**
- **The means to provide real-time integrated public transport information**
- **ANPR data collected to show traffic patterns and predictability of what happens when there are problems on the road network leading to safer and more efficient journeys**
- **Sensors in homes of vulnerable people to enable access to services and permitted monitoring of live health data**
- **Facilitation of a Living Labs environment to trial new technology**
- **Predictability and management of public safety risks**

The deliverability of this vision requires long-term preparation and planning. Oxfordshire has an ideal opportunity to develop this as we facilitate delivery of a significant amount of new housing. Where new garden villages are planned, the means of delivering the necessary integrated infrastructure is relatively easy to design-in, rather than retro-fit, and these locations then become ideal digital infrastructure bridgeheads to launch into neighbouring communities.

In Oxfordshire approximately 24% of premises currently have access to full-fibre broadband infrastructure, meaning that to achieve ubiquitous access to this future-proof digital infrastructure will require deployment at a scale not seen before, if we are to realise our growth potential. Equally, the next generation of mobile connectivity, 5G, depends on extensive availability of fibre to deliver the low latency and very high capacity demanded by this wireless technology, whilst filling in geographical gaps in 4G mobile coverage remains an important requirement too. This creates a need for the OCC led programme to change emphasis too, with the forming of a Digital Infrastructure Programme underpinned by a Digital Infrastructure Partnership comprising the county council, OxLEP, city, and district councils. This partnership will be pivotal to the success of the programme. Operationally, ensuring that all planning policies are aligned and public sector assets made available to telecoms operators, whilst the partnership will also enable local leadership and ownership in driving the programme forward.

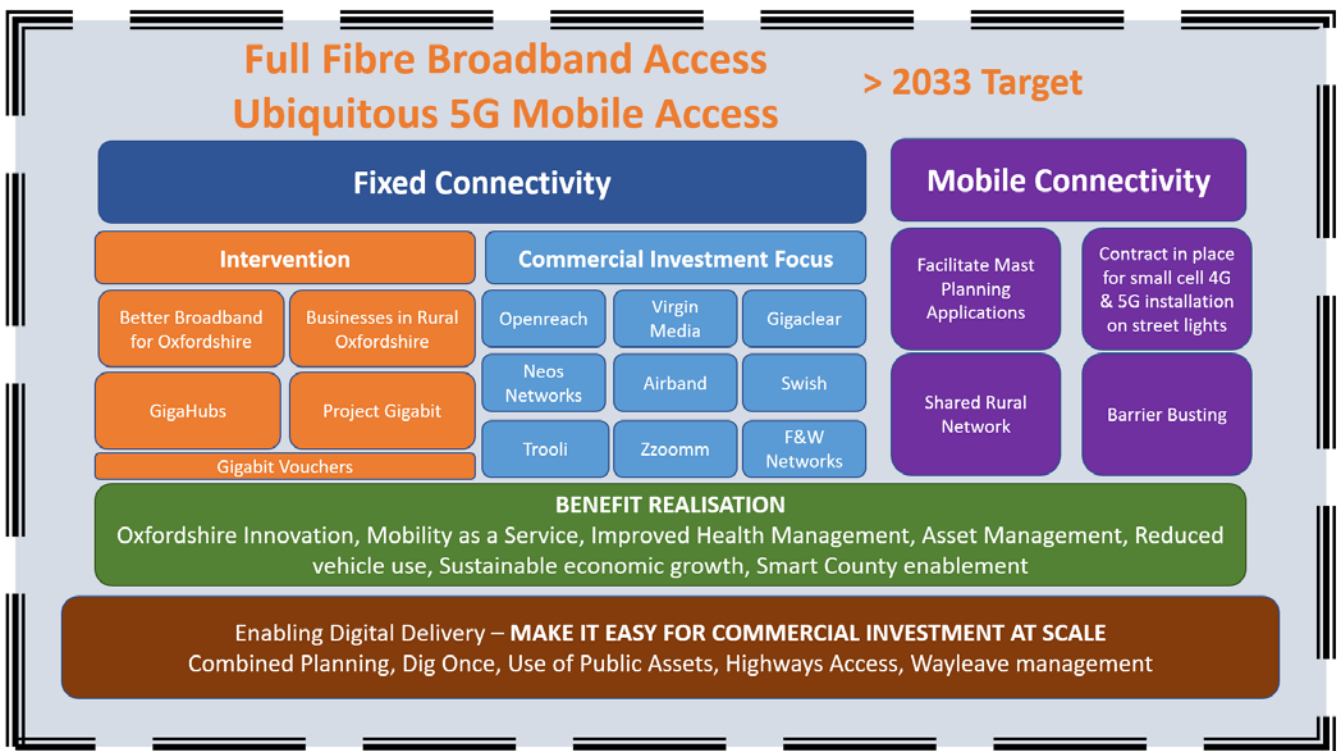
By definition the public sector is not a digital infrastructure provider, and although this document sets out specific workstreams aimed at contracting digital infrastructure improvements, the key responsibility of the Digital Infrastructure Partnership is to provide strategic leadership, providing a coordinated facilitation role in ensuring private sector investment in digital infrastructure is maximised in Oxfordshire, for example by;

- **Enabling network operator access to public sector assets such as ducts, street furniture, & rooftops**
- **Taking a strategic approach to use of public sector assets to achieve maximum benefit rather than short term financial benefits**
- **Mapping potential public sector assets and make available to fixed/mobile network operators**
- **Ensuring Local Plans (as a multi-tier authority) are aligned with the latest (May 2021) NPPF guidance in respect of full-fibre provision in all new housing developments**
- **Ensuring that a summary of this Digital Infrastructure Strategy and Delivery Plan is contained in all other relevant strategic documents such as the Local Industrial Strategy, Local Transport and Connectivity Plan, & Oxfordshire Plan 2050**
- **Align OCC Highways with the DCMS Street works Toolkit where possible**
- **Appointment a Digital Infrastructure Champion by each partnership member to coordinate and lead on cross-public sector alignment and market engagement**
- **Creating a Digital Infrastructure Partnership with Oxford city council and all Oxfordshire district councils**

➤ **Setting targets for availability of superfast broadband, gigabit capable connectivity, full-fibre, and 5G**

This partnership approach is critical in achieving the goal of significant **private sector investment** in our county, as well as being the agent applying for central government funding, and managing delivery of any resultant intervention programmes aimed at improving availability of full-fibre and 5G mobile. We must provide a path of least resistance to fixed and mobile network operators, supplying them with all appropriate information equally and consistently (for example the locations of planned housing development as part of the Future Oxfordshire Partnership and remove barriers to digital infrastructure delivery wherever this is practically possible.

The diagram below sets out the components of the Digital Infrastructure programme, under either intervention funded activity (public funds eligible to be used), and commercial activity requiring focussed working with telecoms operators;



Superfast, Ultrafast, and Full Fibre Broadband

Commercial Operators in Oxfordshire

‘Commercial’ broadband simply means coverage provided by an Operator on a standard commercial basis where the investment required is considered by the supplier to return a profit over a standard return-on-investment period. This

contrasts with 'intervention' coverage where public funds have been needed to support the business case for investment in the build of new network infrastructure. As of the end of 2018, most broadband infrastructure Operators, including Openreach, are only building full-fibre (FTTP) infrastructure.

BT Plc - Openreach

Most commercial broadband coverage in Oxfordshire is provided by BT Openreach. This is an 'Open Access' network whereby over 100 Service Providers can productise and sell fibre-based broadband services. This is mandated by OFCOM due to the relative market dominance of the Openreach infrastructure.

Technical Information: The predominant VDSL solution deployed by Openreach is Fibre to the Cabinet (FTTC). As this depends on using the existing copper access network to distribute service to premises, it is constrained by distance between the fibre cabinet and the served property. This is a maximum of 80Mb/s download and 20Mb/s upload. Increasingly Openreach are enhancing this capability in Oxfordshire with G-Fast which enables up to 300Mb/s download over existing copper wires, for premises within 200m of the fibre cabinet. There is also a growing Fibre-to-the Premise (FTTP) footprint offering 1Gb/s download speed capability and Openreach have committed to FTTP infrastructure to 25m premises by 2026

As of 2022 most Openreach broadband infrastructure is FTTC, but all new infrastructure build is FTTP. During 2019 Openreach made a public commitment to connect 15m UK premises with full-fibre connectivity by 2025 and this target has now grown to 25m premises by 2026. During 2021 Openreach announced significant investment in upgrading 18 exchanges across Oxfordshire and this has increased to 23 exchange areas during early 2022, to full fibre. It is important to note that Openreach is also required by OFCOM to grant other licensed Operators access to their duct and poles estate under an agreement known as PIA (Passive Infrastructure Access). From an engineering perspective, BT is also reconfiguring their network such that the hitherto separate leased line (private circuit) networks and fibre broadband networks are effectively combined into a single architecture whilst they prepare for switching off the PSTN (copper telephone line) network, currently set to happen by 2025. This will be important for the UK in a number of areas as we move to Voice over IP (VoIP), including the strategic benefit of freeing up much needed space in their duct network by way of removing redundant copper lines.

Virgin Media

Virgin Media also have significant coverage in metropolitan areas in Oxfordshire, notably, Oxford, Banbury, Abingdon, Didcot, & Bicester. It can be noted that collecting accurate planned coverage extension of the Virgin Media network has proven difficult as this is demand-driven under Project Lightning.

<http://www.virginmedia.com/corporate/about-us/our-key-projects.html>

This project is promising some £3bn investment to extend their footprint by a further 4m homes. (As at 2016 VM are estimated to have coverage serving 14.5m premises). The VM network is not 'open access' and all services are contracted directly with Virgin Media (as at 2021). The demand-led investment process is informed by an application process known as 'Cable my Street'. Further information on Project Lightning, and registration of interest is available at:

<http://www.virginmedia.com/cablemystreet/>

Virgin Media along with Openreach are the two main national infrastructure Providers in the UK. Both have industrialised processes for building fibre infrastructure to new housing developments.

Technical Information: The Virgin Media network is a hybrid of fibre and 'cable' which is understood to be co-axial cable. During 2021 the Virgin Media network in Oxfordshire has been upgraded to Docsis 3.1 which provides speeds up to 1 Gb/s. The Virgin Media footprint covers c 40% of Oxfordshire premises.

Gigaclear Plc

Gigaclear is a relatively new entrant to Fibre Broadband infrastructure delivery, having been formed in 2010. The business is based in Oxfordshire and delivered its first live network in Rutland. The Gigaclear network is

predominantly contracted directly as a service from Gigaclear, but it is an open access network and they do have additional service providers. Further information is available at <https://www.gigaclear.com/>

Technical Information: Gigaclear provides all their broadband connectivity as FTTP, offering packages up to 1Gb/s.

Within Oxfordshire, Gigaclear have provided gigabit capable broadband to some 21,000 premises entirely within rural and very rural topology and are currently adding another 30,000 premises mainly in West Oxfordshire although with some in the north of the county, through their commercial build programmes. Although they started with a single supplier model, they have now onboarded additional service providers in a Wholesale model. They have yet to have sufficient scale to onboard larger service providers such as Sky or Talk Talk, but as the volume of their connected premises increases, this is more likely to happen. They have also completed delivery of the second phase of BDUK broadband delivery in West Oxfordshire and are a supply partner to Neos Networks for the Oxfordshire County Council Rural Gigabit Connectivity Hub Site project.

Airband

[Airband](#) is an independent broadband operator founded in 2009. The initial delivery followed a hybrid wireless model, but has shifted to delivery of full-fibre. In November 2019, Airband were successful in winning two Lots (of four) in the Oxfordshire county council procurement of full-fibre connectivity, funded by DeFRA. This contract will deliver full-fibre broadband access to c 1200 rural business and residential premises in Oxfordshire by July 2022.

Hyperoptic

Hyperoptic broadband is a relatively new entrant to Fibre Broadband infrastructure, having been founded in 2011. They specialise in full-fibre broadband to existing and new Multiple Dwelling Units – flats and apartments. The company is estimated to have around 75,000 full-fibre connections in UK cities. They currently only provide retail services, but it is understood they are considering moving to an open access model.

Open Fibre Networks Ltd (OFNL)

[OFNL](#) provides full-fibre broadband (as well as TV infrastructure) to new build residential and commercial MDU premises across cities in the UK. They have an open access network with six resellers currently providing service contracts. As with all full-fibre infrastructure operators, the network offers speeds of up to 1Gb/s. They currently have live installations or planned installations numbering nearly 7,000 premises in Oxfordshire.

Zzoomm

The ex-CEO and founder of Gigaclear, Matthew Hare, set up a new gigabit broadband operation called [Zzoomm](#) in March 2019. The company has decided its first target coverage area was for some 6,500 premises in Henley-On-Thames which were delivered between September 2019 and December 2020. This coverage is provided as full-fibre in a ducted network and is effectively for the entirety of Henley-on-Thames. Zzoomm's target locations are market towns and suburban areas of cities. The company aspires to extend full-fibre coverage to 1m premises over the next five years and is based in Oxford. Zzoomm are a supply partner to Neos Networks for the Oxfordshire County Council Rural Gigabit Connectivity Hub Site project.

NEOS Networks

Formerly known as SSE Enterprise Telecoms [Neos](#) has a high bandwidth fibre network that spans over 20,000km across the UK, including over 350 Points of Presence (PoPs) and connections into 90 commercial data centres. Following a procurement exercise in the Spring/Summer 2021 they were awarded the contract to supply Oxfordshire County Council's Rural Gigabit Connectivity Hub Site project which will connect 200 public buildings in Oxfordshire including council offices, libraries, GP surgeries, schools, community centres, and museums.

Swish Fibre

[Swish Fibre](#) is a new entrant to the full-fibre broadband scene. In December 2019, Swish Ltd announced it had been acquired by Fern Trading Ltd and that it had unlocked £250m of funding to invest in building full-fibre broadband to 250,000 homes. The planned rollout currently extends along the M40 corridor in

Buckinghamshire, but extends to Thame and Cumnor in Oxfordshire. Swish is a registered Openreach Communications Provider and have obtained Code powers from Ofcom. It is understood they will use Openreach PIA in the majority of their infrastructure build. Swish's business model is based on the fact that they will not be a sole supplier in any one area and they are actively looking to extend their network in Oxfordshire.

F&W Networks

[Fibre & Wireless \(F&W\) networks](#) is another entrant to the broadband infrastructure market. Despite the name, their focus is on full fibre (FTTP) broadband infrastructure build. They are supported by the retail UK ISP Hey!Broadband. They have recently started building FTTP broadband infrastructure in Kidlington Oxfordshire and may extend this to other, mostly urban, locations in the county.

Trooli

[Trooli](#) is another relatively new UK telecoms infrastructure build company which has been able to expand its FTTP build by having secured capital funding. They aim to connect 1m homes with FTTP by 2025. Trooli are currently planning (to be confirmed – April 2022) to build FTTP in Watlington, Oxfordshire

Voneus

[Voneus](#) is a full fibre broadband provider which is orientated to delivery of full fibre infrastructure in rural areas. Their background is in wireless connectivity and are now upgrading existing infrastructure to full fibre (FTTP). The majority funder is Macquarie Capital. Plans for build in Oxfordshire are not yet clear.

Fixed Wireless Broadband

There are several fixed wireless broadband providers operating in Oxfordshire. The Better Broadband programme has engaged with a range of these, including Wurzel, Countryside Broadband, Voneus, & Village Networks. Further information including contact details is available at the Better Broadband for Oxfordshire website:

<http://www.betterbroadbandoxfordshire.org.uk/cms/>

Although the broadband services provided by these operators are not proven as technically Next Generation Access (NGA) compliant, in many cases they offer faster broadband access than is otherwise available.

Better Broadband for Oxfordshire (BBfO)

<http://www.betterbroadbandoxfordshire.org.uk/cms/>

The county council initiated the Better Broadband for Oxfordshire programme in 2013 to address broadband coverage in Oxfordshire which at the time had 69% of premises able to access broadband at speeds above 24Mb/s. The foundation of this

initiative is a multi-million-pound contract with BT for superfast broadband to be deployed in areas defined as under market failure conditions, and targeted;

- 64,500 Premises to have access to superfast broadband by December 2015
- 75,600 Premises to have access to superfast broadband by December 2017
- 77,800 Premises to have access to superfast broadband by December 2018

Following Open Market Reviews (OMR's) in 2012, 2014, a premise qualified to be included within this targeted coverage only when no provider has superfast broadband available or planned on a commercial basis within three years from the date of the OMR. From the baseline commercial coverage data received in the OMR process we have been able to estimate percentage coverage of Oxfordshire in line with the dates/volumes above.

- 90% superfast coverage by December 2015 ✓
- 95% superfast coverage by December 2017 ✓
- 96.5% superfast coverage by December 2018 ✓

This is the broadband intervention programme managed by Oxfordshire County Council, in partnership with BT and supported by Broadband Delivery UK (BDUK). Funding Partners (Capital) for the programme are;

- Oxfordshire County Council (£10.4m)
- BDUK (£8m)
- South Oxfordshire District Council (£1m)
- Vale of White Horse District Council (£250k)
- Cherwell District Council (£500k)
- Oxford City Council (£150k)
- OxLEP (£2m)
- SEMLEP (£240k)
- BT (£9m)
- Total £31.4m

Better Broadband for Oxfordshire (BBfO) was set up as a delivery programme in December 2013. This followed the selection of BT Telecommunications plc as the successful bidder for the intervention programme under the DCMS initiative for improving the availability of superfast broadband (defined as a minimum of 24Mb/s download speed). This is administered, governed, and part-funded by BDUK.

As described in the Introduction, coverage was contracted in three phases and successfully completed in March 2020.

BBfO Background & Strategy

Oxfordshire County Council (OCC) set out a simple vision for the programme in 2014. This was for the county to have the highest possible availability of superfast broadband (SFBB) with the funding available (£14m public funds + £6m BT investment). Coverage was modelled based on best value for money, i.e. no specific target sectors or types. The principle worked to was that this approach would build out the fibre footprint from urban locations (covered commercially), into the rural

heartland of the county. The contract with BT was a non-framework contract and drafted to facilitate a call-off further coverage without the need for another procurement.

During 2014 BDUK confirmed a second round of DCMS funding under the Superfast Extension Programme (SEP), and OCC engaged with potential funding sources to be able to secure access to the SEP funding. This resulted in OCC contracting phase 2 during 2014, for delivery to start in 2016. This time, coverage was modelled to consider the funding source, as well as value for money. As three of the district councils had put up differing amounts and with different populations, the coverage was required to be modelled proportionately. Importantly, the funding provided by OxLEP was focussed on delivering to the Science Vale Enterprise Zone, and business parks across Oxfordshire.

Another driver for the BBfO programme was to make available better broadband based infrastructure to be able to migrate Oxfordshire schools and corporate sites from very expensive leased line services under the OCC legacy corporate WAN network, to superfast broadband. This has been substantively achieved under the programme with schools migrated, and along with the savings achieved by migrating small and medium corporate sites, nearly £1m per annum cost avoidance has been achieved.

Intervention Area Delivery Statistics – April 2022

Speeds

➤ Below 2Mb/s	= 610 Premises
➤ 2 – 24 Mb/s	= 5,432 Premises
➤ 24 – 30Mb/s	= 2,246 Premises
➤ 30 – 50Mb/s	= 16,159 Premises
➤ 50 – 100Mb/s	= 75,745 Premises
➤ 100Mb/s+	= 1,642 Premises

Take-Up

82.3% (cumulative to date across all three delivery phases). This is a very important aspect. Not only does it clearly demonstrate demand for good digital connectivity, but the contract with BT Openreach has a clawback mechanism whereby take up above 20% accrues a payment back to OCC. This has enabled the Digital Infrastructure programme to move forward on a self-funding basis.

Overall coverage in Oxfordshire (Think Broadband data July 2022)

➤ Superfast (>24Mb/s)	= 98.6%
➤ Superfast (>30Mb/s)	= 98.4%
➤ Ultrafast (>100Mb/s)	= 68.9%
➤ Full-fibre	= 27.4%
➤ Gigabit-Capable	= 65.8%
➤ Below USO (<10Mb/s)	= 0.6%

➤ Below 15Mb/s = 0.8%

West Oxfordshire

In 2014, West Oxfordshire DC (WODC) decided to not apply funding to the BBfO programme and to run a separate procurement targeting full superfast broadband coverage in the district. The initial progress was slow with the misfortune of the selected Supplier terminating the contract in late 2016, without any delivery achieved.

This resulted in WODC needing to run a further procurement which was initiated in early 2017, and resulted in the award of a contract to Gigaclear plc. Delivery is complete and has enabled c 10,500 premises in West Oxfordshire to have access to FTTP adding to the composite coverage for the county. This contract has also been a foundation for significant further investment in Oxfordshire by Gigaclear.

Business in Rural Oxfordshire (BiRO)

OCC has been awarded £6.3m by DEFRA to provide ultrafast broadband coverage to businesses in (very) rural Oxfordshire that remain without any planned coverage. This was subject to an OJEU procurement resulting in two new contracts being signed (BT & Airband) in November 2019 with the two Operators due to complete rollout by September 2022. BT has completed this contract and Airband is expected to complete by September 2022.

This new delivery project is delivering full-fibre broadband to c 705 rural business premises and 829 residential premises across two geographical Lots. This represents approximately 0.4% full-fibre connections in Oxfordshire. The project is delivered by the existing Oxfordshire Digital Infrastructure team with the project cost drawn down from the BT Better Broadband contract underspend and gainshare (from take-up) income.

The two contracts are also delivering additional FTTP build on a purely commercial basis to premises in the adjacent geography to the contracted premises.

GigaHubs Project

OCC has been awarded £1.8 million by DCMS and is using up to £5 million of its own funding drawn down from the BT Better Broadband contract underspend and gainshare (from take-up) income to provide full fibre connections to 200 public sector buildings in Oxfordshire. These buildings include council offices and some GP's surgeries, schools, libraries, museums and community centres/village halls in locations where there is no current plan for commercial delivery of FTTP. A procurement based on a Crown Commercial Services framework took place in the spring of 2021 with a contract being awarded to a consortium bid headed by Neos Networks in July 2021. Delivery mostly comprises Openreach FFIB (FTTP), with additional coverage by Virgin Media O2, Neos Networks, & Gigaclear fibre services. The first milestone of ten sites completed on time in March 2022 and the contract is expected to complete in late 2023.

Focus on Gigabit Capable and Mobile (including 5G)

Whilst it was identified over ten years ago, that access to fast reliable broadband was to an important infrastructure consideration for Oxfordshire, the relevance and criticality of this has become more pronounced since the inception of the programme. Please also see the section on Public Sector Assets (p30) for specific actions planned around mobile coverage.

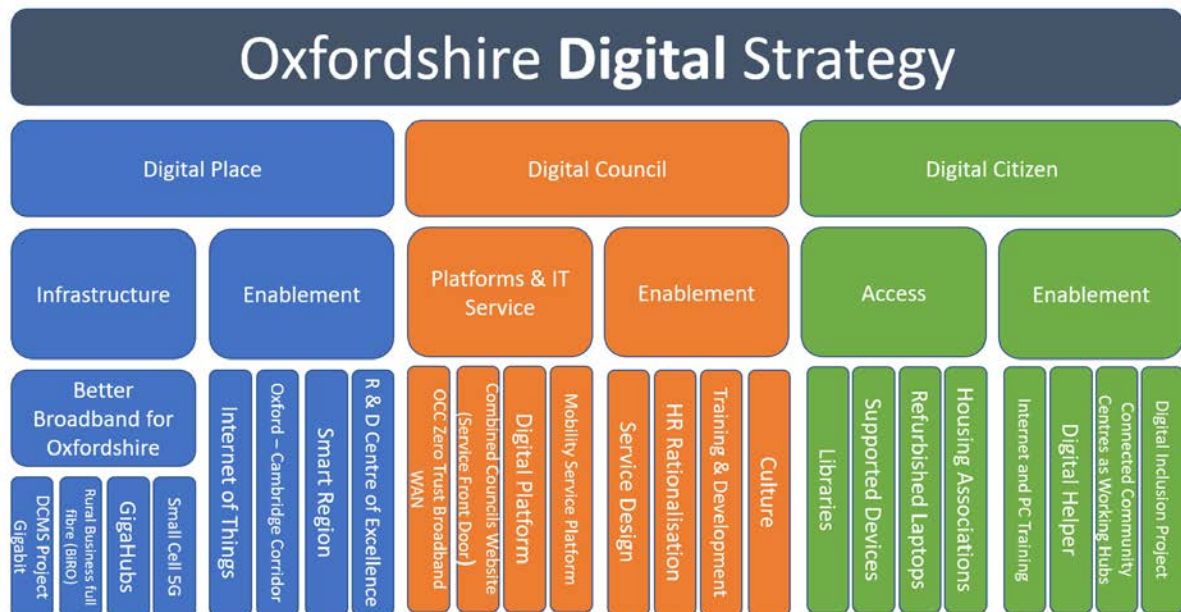
During 2018, DCMS significantly ramped up activity and focus on planning for the UK to have Full-fibre access to all premises by 2033, and for the UK to be a world leader in rollout of 5G mobile services. This is evidenced in the [Future Telecoms Infrastructure Review](#). This ambition was changed following the General Election of 2019 and the date brought forward to 2025 with £5 billion being allocated to achieve it. Following a subsequent spending review in 2020 and consultation with suppliers this ambition was scaled back to 85% of the UK having gigabit capable (rather than full fibre) access by 2025. £1.5 billion pounds was made immediately available for this purpose in the proposed timescale and another £3.5 billion to be made available after this time. Correspondingly, all Digital Infrastructure programmes in Oxfordshire are focussed on the gigabit capable and 5G agenda and are incorporated in the Oxfordshire 2050 Plan, the Oxfordshire Transport & Connectivity Plan, and the Oxfordshire Local Industrial Strategy being led by OxLEP:

Digital Infrastructure is increasingly understood to be a key enabler for transforming many facets of Oxfordshire life;

- Digital Council/Digital Citizen. As Oxfordshire councils and Oxfordshire Health bodies transform how public services are delivered, it is increasingly important to ensure all citizens can transact online, and some of these applications, such as advanced remote healthcare, will require very high digital capacity
- Economic Growth – identified sectors/types
 - Enterprise Zones
 - Business Parks
 - Oxford, Milton Keynes, Cambridge Arc
 - Rural businesses/start-ups
 - Agriculture
- Attract inward investment and compete commercially both within UK markets and internationally
- Digital Inclusion to enable all to learn, work, and access economically advantageous goods and services online
- Environment – reducing the need to travel by working online from home
- Improving delivery of health and social care services
- Enabling the means of Connected Autonomous Vehicles (CAV's) to become reality

- Enabling Oxfordshire to operate as a Living Lab, for example by ‘baking-in’ Internet of Things (IoT) capability to all infrastructure projects, Oxfordshire can greatly improve the data capture (measuring/monitoring/tracking) to help improve analytics and ultimately improve service delivery

The Oxfordshire Digital Infrastructure Strategy can also be considered as a component of a broader Digital Strategy which encompasses how the public sector is increasingly shifting services online, which is described in the schematic below;



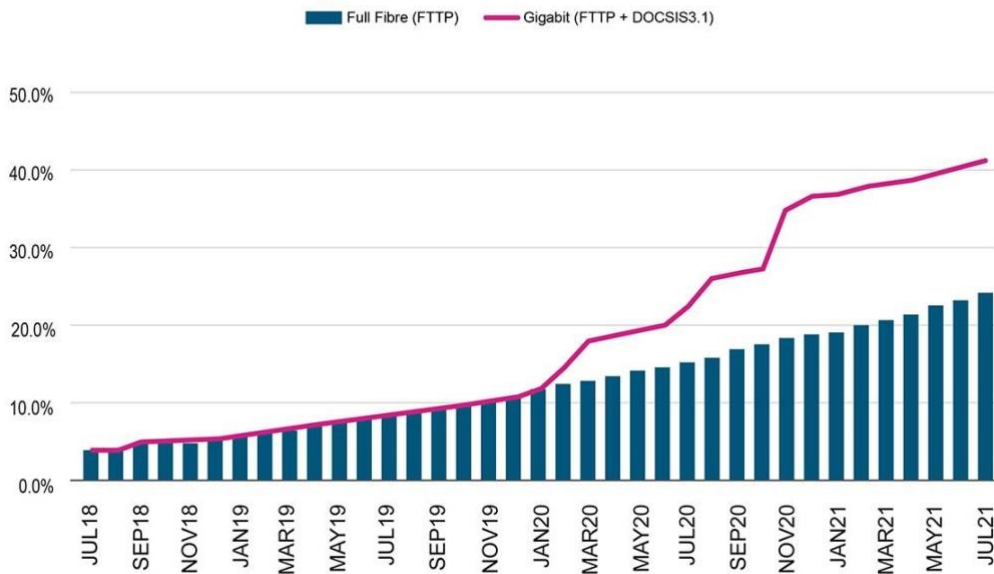
Gigabit Capable Connectivity

The appointment in 2016 of Matt Hancock as Minister of State for Digital, saw a refocussing in DCMS from availability of superfast broadband to the availability of ‘full-fibre’. This has continued with each ministerial change, however, it is important to note that both the language used and the technical delivery expected has changed from full fibre to gigabit capable. This is because a large proportion of UK coverage is provided by Virgin Media, whose DOCIS 3.1 network is now gigabit capable although not provided over full fibre but co-axial cable. The previous Minister, Ed Vaizey, had achieved a vast improvement in the availability of superfast broadband, defined as above 24Mb/s, but the current exponential growth in digital services has policy now directed to gigabit capable connectivity. An example of this is with the digital content most used across the world – video. Standard Definition on-demand content made way for High Definition, then 4K Ultra High Definition. Now TV sets capable of 8K definition are being sold. Each of these steps requires a quadrupling of bandwidth in order to stream content. The other major growth area in consumption of huge amounts of data is the shift to cloud computing and storage.

The UK landscape is improving in respect of gigabit capable connectivity thanks to considerable commercial investment by suppliers and interventions by DCMS. Currently 67% of premises have access to either a DOCIS 3.1 connection or a fibre

to the premise (FTTP) connection. The table below shows the progress made over the last 3 years in the UK.

Full Fibre and Gigabit Coverage, UK



[Source: Thinkbroadband.com]

Technically there is an advantage to building a full fibre network rather than one based on co-axial cable. Theoretically, full-fibre networks have almost unlimited speed capability, with the constraint being the equipment at either end of the fibre path. A single fibre can transmit at terabit speeds using existing technology, and although expensive to install, it is then by definition effectively ‘there for life’ and has very low failure rates meaning maintenance costs are modest.

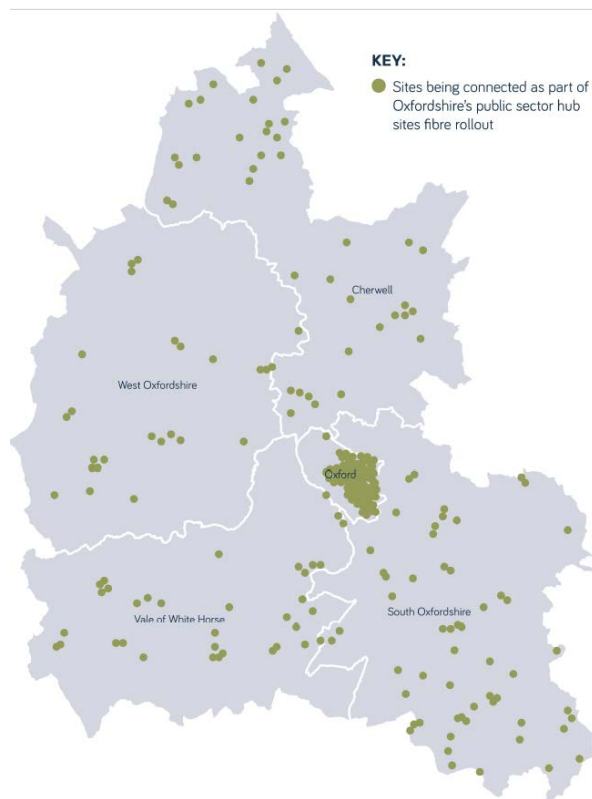
Gigabit Broadband Voucher Scheme

[This scheme](#) is a replacement for the very successful Gigabit Voucher Scheme and Rural Gigabit Voucher Scheme. £210 million has been made available for the operation of this scheme between 2021 & 2024. It is supplier led and provides business and residential premises £3,500 and £1,500 vouchers respectively to help fund installation of full-fibre infrastructure. The scheme is set to pause in April 2022 as DCMS instigates the initial procurement plans for Project Gigabit. [Government launches new £5bn ‘Project Gigabit’ - GOV.UK \(www.gov.uk\)](#)

The voucher schemes in Oxfordshire have been supported by further top-up funding from MHCLG and collectively have delivered access to FTTP for several thousand homes and businesses. **As of April 2022 the voucher scheme is paused pending Project Gigabit procurement commencing.**

GigaHubs

[GigaHubs: key information - GOV.UK \(www.gov.uk\)](https://www.gov.uk) is a DCMS initiative aimed at building full fibre infrastructure to a range of public buildings. The Digital Infrastructure team in Oxfordshire has worked with DCMS to develop a project based on the GigaHubs programme and has recently signed a contract with Neos Networks, following a procurement using the Crown Commercial Service framework (RM6095). This will deliver full fibre connections to a range of council buildings, GP surgeries, schools, libraries, museums, and Community Centres. It is part funded by DCMS and part funded by OCC (funding drawn down from BT gainshare payments to OCC from the Better Broadband for Oxfordshire programme).



Neos will manage the build and installations comprising their own dark fibre, Virgin Media dark fibre, Gigaclear FTTP, and Openreach FTTP. Build has started and the first milestone of eleven sites completed on target in March 2022. This is the first GigaHubs project in the UK and is also the first of any such projects to include community centres & village halls in the rollout. This aspect paves the way for developing local digital hubs enabling better local delivery of public services. Further information can be found on our website [Gigahubs | Digital Infrastructure Programme \(digitalinfrastructureoxfordshire.co.uk\)](https://digitalinfrastructureoxfordshire.co.uk)

Project Gigabit

Details of Project Gigabit, a government scheme to upgrade broadband infrastructure in hard-to-reach areas were published in August 2021. As with previous government intervention programmes the Project Gigabit programme targets properties that would otherwise have been left behind in broadband companies' rollout plans, prioritising those that currently have the slowest connections.

Funding

The funding model is gap-funded, as in previous superfast programmes, where suppliers/operators bid in a formal procurement on the basis of seeking intervention funding to support their own investments in locations of market failure. As the UK has now left the EU it has its own state aid regulations, however, these are very

similar to the EU rules. Any government funding available will comply with the appropriate regulations.

Scope

The available funding will target rural areas rather than urban and semi-urban, which DCMS consider do not need state funding to support the necessary market investment in full-fibre infrastructure. Eligible levels of rurality have been defined by OFCOM area classifications.

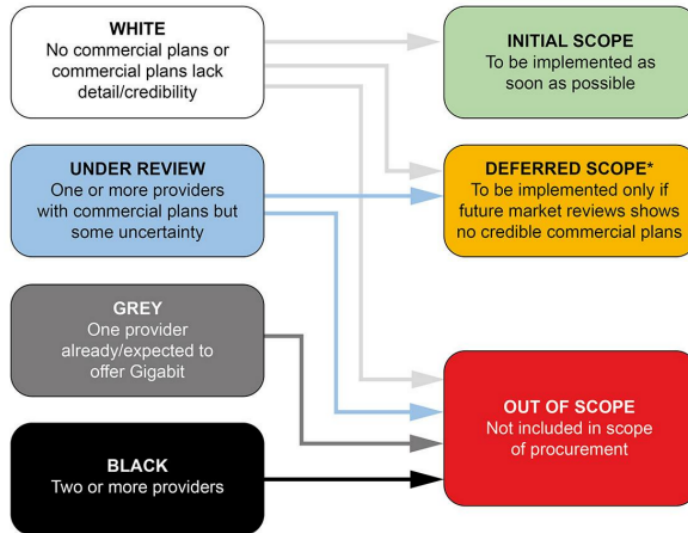
The country has been divided up into a series of 38 lots, many of which cross local authority borders. Oxfordshire has been combined with West Berkshire to create Lot 13, and has £114m of funding identified as available for the procurement. The process for confirming the Intervention Area (where public funds may be used to support the cost of implementing FTTP) is determined by way of;

- Open Market Review (OMR). This entails capturing all operator FTTP existing build and planned build over the next three years. Operators are not obliged to respond to the Review process, but if they don't declare existing or planned coverage, they risk public funding supporting an operator to install FTTP infrastructure where it already exists. This 'overbuild' is not favourable to the commercial interests of operators, nor value for money for the public purse. The operator responses are collated, aggregated, and provides a single data set showing where there is no planned coverage by any operator.
- Public Review (PR). This is a follow up consultation which provides all operators which responded to the OMR the consolidated (anonymised) view of the proposed Intervention Area. Operators are afforded another opportunity to confirm if their build plans are accurately reflected. It should be noted that the evaluation by DCMS of the operator submissions includes an assessment of the viability of these responses in respect of sufficient detail and evidence of funding.

Both of these phases were completed between December 2021 and March 2022. The next stage is for DCMS to initiate consultations with all operators which might bid under the planned procurement during the second half of 2022. Throughout this process the Oxfordshire Digital Infrastructure team are extensively involved with the DCMS programme team. As the Local Body, there is a need for our programme to validate proposed plans and provide insight into local operators build plans.

Procurement Strategy

The first step in determining the procurement strategy is heavily dependent on the outputs from the OMR and PR stages. Every Oxfordshire will be allocated a status as per the below diagram.



* "Deferred Scope" is only relevant to Regional Supplier contracts. There is no "Deferred Scope" in Local Supplier contracts: premises are either In Scope or Out of Scope.

DCMS plan to have two procurement types:

- Regional Procurements (Type B) where one operator is selected following a competitive tendering process, to deliver as much FTTP coverage across the entire Lot13 area, as is possible from the funding available
- Local Procurements (Type A) where Lot 13 is itself divided into smaller Lots (specific geographies) and each competed via the Dynamic Purchasing System [Welcome \(force.com\)](https://www.force.com) . The benefit of this approach is enabling smaller operators to bid for delivery of FTTP in locations where they have, are near to their existing fibre footprint.

It is also possible there will be a hybrid of these two types. In both Regional and Local Supplier contracts, BDUK will only build to premises that have been designated as White - premises with no gigabit network infrastructure and where none is likely to be developed within three years. Conversely, unless premises are classified as White, BDUK will not authorise intervention. In some cases, BDUK may choose either to defer intervention to some White premises or to descope them from the procurement where it is believed this will deliver the best value. For instance White premises may be descoped if they are adjacent to Grey premises because although there are no declared plans to build there, it is likely to be straightforward to reach them once the Grey premises have been delivered. For premises that are included in the Deferred Scope of contracts, BDUK will seek a price from the Regional Supplier, but will not authorise build unless and until they are re-classified as White. BDUK will always either descope Under Review premises or defer build to them and Grey or Black premises will always be descoped. There is no Deferred Scope in the Local Supplier contracts: premises are either in scope or out of scope, so Local Supplier procurements will never include Under Review premises in their scope. BDUK and OCC will continue to monitor and verify telecoms operators' plans, and in the event that commercial plans fall away or are not progressed sufficiently or fulfilled in their entirety, any premises can be re-classified as White and will then become eligible for intervention under our contracts. This is an inevitably complex process requiring time and effort from telecoms operators, OCC, and BDUK.

City and Major towns

Whilst Project Gigabit focuses on securing FTTP coverage in the Intervention Area, it is implicit that urban and semi-urban areas will be connected with full-fibre infrastructure without the need for public funding. Whilst this makes good sense as a combined business case where the infrastructure required for the part public funded rural areas will also assist the business case for the more urban areas in the vicinity, it will still require significant engagement with commercial operators to strategically align delivery of both rural and urban areas. The Oxfordshire Digital Infrastructure programme is engaging with the following commercial operators;

- BT Plc – Openreach
- Virgin Media
- Gigaclear Plc
- Airband
- Trooli
- Open Fibre Networks Ltd (OFNL)
- Swish Fibre Ltd
- Glide Group
- Zzoomm
- F&W Networks
- Netomnia
- Voneus
- Ecom Fibre Ltd
- Fixed Wireless Broadband Operators

In general, many of these operators, especially the smaller ones, are reluctant to provide a detailed forward view of their build plans. This is mainly because of a desire to have the advantage of being the first operator in a town or village. Openreach has announced exchange areas that are planned for FTTP build along with an approximate timeline. This represents a significant scale of FTTP build with c 80,000 premises in scope, but it should be noted that not all premises in an exchange area will necessarily be included in the FTTP rollout. Regular updates to these plans are available at [Where and when we're building Ultrafast Full Fibre broadband | Openreach](#)

PSTN Line Withdrawal

A big driver for full fibre delivery is Openreach withdrawing PSTN services by 2025/2026. PSTN services are effectively what provide most existing residential telephony services. Many Oxfordshire residents have already received letters from the service provider explaining they need to adapt how they use telephony to become Voice over IP (VoIP). This is where the handset is plugged into a broadband router rather than the telephone line socket, and voice services are conducted over the internet. Where FTTP is available, this will enable Openreach to physically remove the copper lines back to the cabinets/exchanges, freeing up capacity in ducts and reducing the cost of operating/maintaining the PSTN which has been in place for around a century.

Where FTTP infrastructure is not available, the copper lines will be retained to carry internet traffic, and VoIP will be the mechanism for using voice services.

Future Oxfordshire Partnership

The Oxfordshire 2050 (JSSP) plan is for 100,000 new houses to be built by 2033 (Approximately 25% of which are completed and 25% approved through the planning process). This represents an increase of nearly one third to the housing stock in Oxfordshire. OCC will work alongside Planning authorities to ensure appropriate steps are taken to have full-fibre infrastructure installed at these sites.

This also presents an opportunity to work proactively with fibre infrastructure operators to establish viability of connecting premises passed with fibre from their points of presence en route to the new housing developments. Equally, proactive working with Mobile Network Operators which will have new revenue opportunities from the new housing can encourage fibre to be installed for their mobile mast infrastructure. The Digital infrastructure programme is also developing a blueprint for embedding smart infrastructure in the new villages planned for build over the next twenty years. This will aim to reduce travel, improve well-being, and create a sustainable approach for a larger population.

Small Towns and Semi-rural

This is the mid-ground between rural areas which will have targeted intervention funding, the more densely populated areas which will be commercially covered, and the areas in which new housing is built.

The Oxfordshire Digital Infrastructure Partnership has a collective role to play in promoting commercial investment by infrastructure operators in these areas. The OCC Better Broadband programme, BiRO project, and the West Oxfordshire superfast programme have enabled some 1000km of fibre to be installed across the county, with much of it laid in semi-rural environs. This means that the incremental cost of extending that fibre backhaul network into individual premises is significantly lower than it would have been without these intervention programmes. When combined with increased demand over time for ultrafast broadband, as online content and applications evolve, the business case for commercial upgrading of digital infrastructure will become stronger. Demand driven (for example vouchers) intervention may be required to supplement commercial investment to complete delivery

In summary, there are several aspects which will work together to collectively build a full-fibre Oxfordshire;

- Map all planned housing build in the county. Most of the locations for the 100,000 premises are known with some accuracy. With close management of developments going through planning we can ensure these are all built with full-fibre access
- Map all existing and planned FTTP deployment in the county by all suppliers
- Map the city and large towns in Oxfordshire as planned for full-fibre being built on a commercial basis by 2031
- That will leave the area and scale of uncertainty which can also be mapped at a premise level. These locations can then be plotted as approximate

distances from existing fibre bridgeheads serving new housing developments and city/towns and existing FTTP.

- This becomes the intervention area requiring intervention funding under the DCMS Outside-In programme

Mobile Connectivity including 5G

Developments with very high-speed mobile broadband (under the banner of 5G), provide the enabler for a range of evolving technologies which are no longer 'sometime in the future'. This is the technology required for a connected world where device-to-device connectivity is to become a standard. This is known as the Internet of Things (IoT), and there are already estimated to be over 7bn such connected devices in the world, and again the growth is exponential. The efficient management of key infrastructure will be driven by access to 5G, allowing better use of highways, safer (probably driverless) cars, more environmentally sustainable street lighting, traffic monitoring, air quality measurements, integrated public transport, remote health and social care capabilities etc will all benefit from 5G access. A strategic aim of the Oxfordshire Digital Infrastructure programme is to develop 5G IoT applications in Oxfordshire which will provide practical improvements to the lives of our residents and enhance economic growth whilst using this new technology to assist with sustainability and a reduction in travel and congestion wherever possible.

This technology cannot be separated from the full-fibre subject either. 5G depends on traditional mast mounted equipment and also small cell deployment. Small cell technology is dependent on mobile transmitters every 100m or so, and most transmitters requires a fibre connection. Even 3G and 4G mobile networks currently use wireless backhaul (mast to mast) in some 40% of the UK installations, and this is not going to be sufficient in the medium term.

Alongside the full-fibre initiative being managed within the Department for Digital, Culture, Media, and Sport (DCMS), there is an ongoing 5G Testbeds and Trials Programme. This is aimed at ensuring the UK is at the forefront of 5G development and implementation.

Further funding is expected to be made available by DCMS to support user cases for 5G applications in a rural environment.

Whilst government funding initiatives for 5G pilots has a role to play, delivery at scale is clearly dependent on MNO (Mobile Network Operator) investment. Since the second half of 2019 the four UK MNO's (Vodafone, O2, EE, and Three) have been releasing information about when and where they are planning to roll out 5G infrastructure. 5G coverage is currently rolling out in Oxfordshire with all MNO's with the exception of Vodafone currently offering services in parts of the county. The digital infrastructure partnership team have engaged with the two UK mobile infrastructure service companies – [CTIL](#) and [MBNL](#) (CTIL build and maintain the radio mast infrastructure for Vodafone and O2, whilst MBNL perform this function for EE and Three). This has been facilitated by [Mobile UK](#) with discussions geared to encourage investment in Oxfordshire for both 5G and 3G/4G coverage.

Whilst the future of mobile connectivity is focussed on designing and delivering 5G platforms, there remains a real challenge in parts of Oxfordshire where there is no ability to make or receive simple voice calls, as well as areas devoid of 3/4G mobile data coverage.

Despite intervention attempts such as the Mobile Infrastructure Project (MIP), and promises from industry, a December 2017 report identified that only 20% of people living or working in rural areas (nationally) have access to 4G mobile connectivity. Ofcom has published coverage data for mobile connectivity, but it is difficult to use this to distil an informed view to real-world experience. ThinkBroadband estimates that the average download speed of mobile data (average of both 3G and 4G networks) in Oxfordshire is 39.3 Mb/s. This is up from around 23.4Mb/s in 2017

Following the same trend as occurred with landline technology, data transmission has overtaken voice with mobile communications. Increasingly absence of fast data capability for mobile based workers, has become a real constraint to business efficiency and effectiveness. In a world where knowledge is the sought-after commodity, having no, or slow access to these virtual resources becomes a significant barrier to local economic growth.

There is a £1bn initiative between HMG and the mobile industry called the [Shared Rural Network](#) (SRN) which aims to banish rural 'not-spots', which formally started in March 2020. The HMG contribution (approximately £500m) is funding the deployment of mast infrastructure in rural areas where there is no mobile coverage at all. Meanwhile the MNO's are jointly investing a further £500m to fix the problem of partial coverage where the coverage is not across all four MNO networks. This is being done by way of an agreement to share mast infrastructure such that all four MNO's host their equipment on masts. The SRN initiative is the mobile industry's response to an HMG plan to force the MNO's to resolve the partial coverage problem by way of rural roaming which, for example, happens when you are abroad and your mobile handset connects to whichever Operator has the strongest signal.

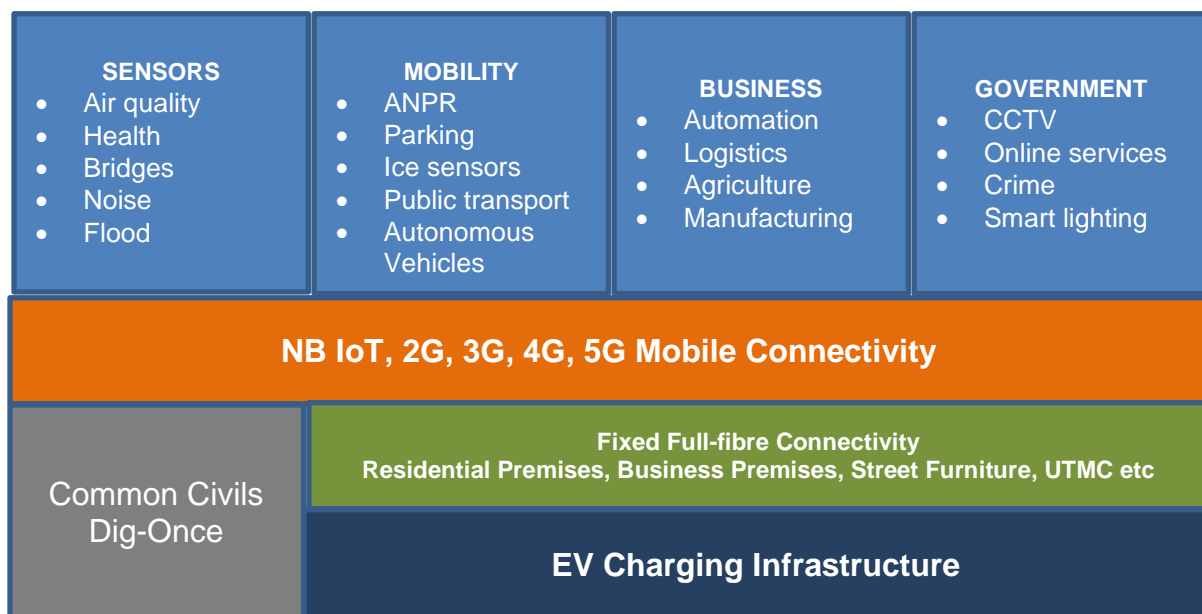
The combined effect of the infrastructure build associated with the 5G rollout and the SRN initiative will lead to significantly more build of mobile mast infrastructure than has been the case in recent years. The 2016 amendments to the Permitted Development Rights and the additional revisions of 2019 will make it easier for MNO's to progress the infrastructure build, but it will be important for Oxfordshire planning authorities to work closely with CTIL and MBNL on behalf of the MNO's, to facilitate the planning process. This is set out in the Digital Infrastructure Partnership Memorandum of Understanding.

Freshwave Contract (Small Cell 5G on street furniture)

Oxfordshire County Council has signed a non-exclusive agreement with Freshwave Ltd to facilitate all four MNOs to access our street furniture (lighting columns etc) for the use of installing small cell 4G and 5G mobile transmitters. As of June 2022 two MNOs have committed to install small cells on several lighting columns in the centre of Oxford with several more planned over the next twelve months.

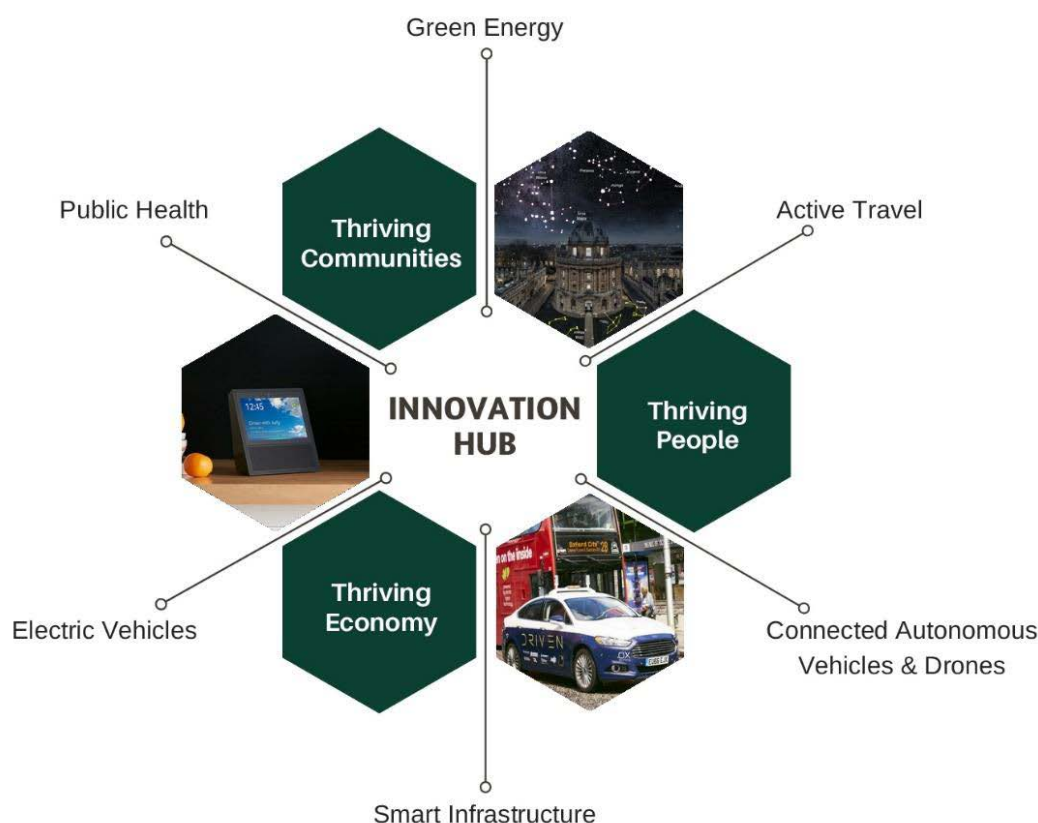
known locations for new-build housing, mapping opportunities for the greenfield infrastructure being built can extend into adjacent areas by way of a ‘fibre bridgehead’ strategy. A memorandum of understanding has been put in place with planning authorities to agree a common approach to encouraging commercial investment, and the OCC digital infrastructure team will continue to engage with central government to secure intervention funding for the areas remaining as commercially unviable. See the [Future Telecoms Infrastructure Review](#)

Smart Infrastructure Components



Oxfordshire Innovation Hub

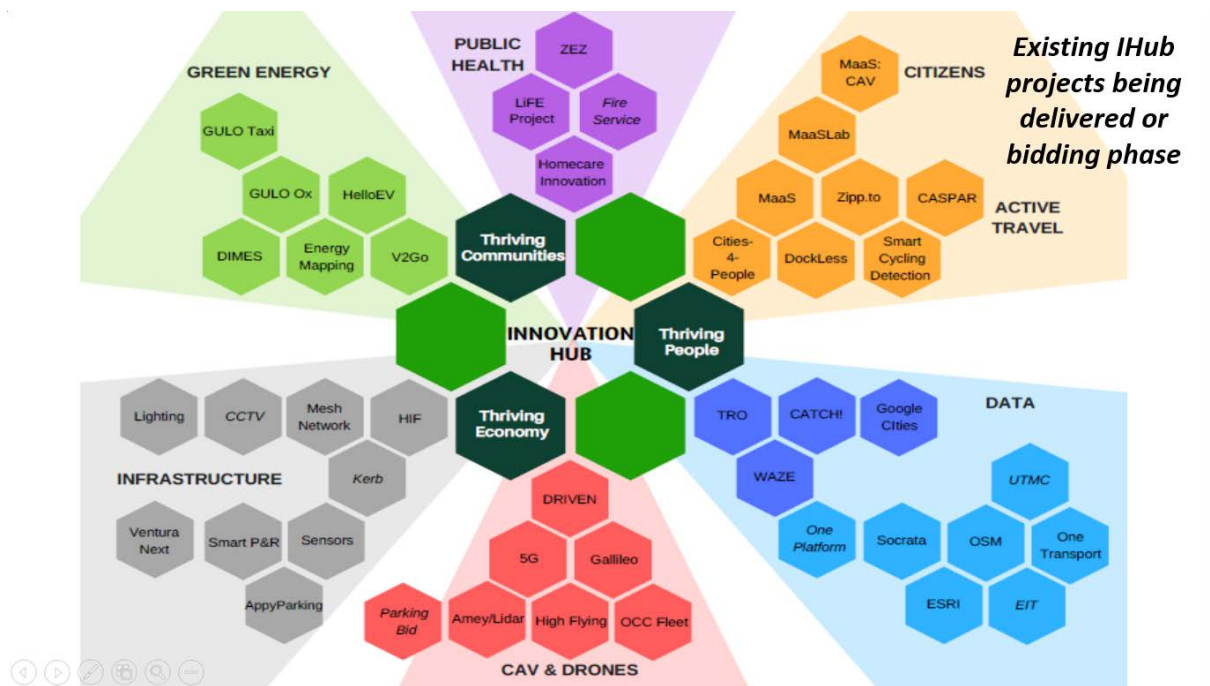
Fixed & Mobile Broadband – Applications and IoT



OCC has a Research and Innovation team responsible for developing capacity and capability in Smart City/Smart County, IoT applications including street furniture connectivity, Autonomous Vehicles, Integrated Mobility, Healthcare, and other related developments which will enrich the lives of Oxfordshire residents.

Much of the work undertaken by this team is dependent on enhanced digital infrastructure. This team also access funding opportunities through organisations such as Innovate UK and has a Community Interest Company [MoBOx CIC](#)

There are specific OCC projects which can encourage early deployment of next generation mobile broadband. A current example is the current procurement of a street lighting contract which will see over 20,000 streetlights replaced with new columns. Here the opportunity is to specify the columns to be able to have smart capabilities such that they can communicate with each other and a central control unit. This will likely be connected with LoRa WAN (Low Power, Wide Area) networking technology. The opportunity is to consider commercial models for Mobile Network Operators (MNO's) to have access to this as an asset for improving small cell mobile coverage on a non-exclusive basis. In return OCC might have access to the MNO fibre ducting for building a high capacity mobile network available to the public sector and small/medium enterprises looking to trial new technologies – this is known as a Living Lab approach. The diagram below describes the range of projects being evaluated or delivered.



Oxfordshire Local Industrial Strategy

OxLEP has submitted a Local Industrial Strategy [Local Industrial Strategy | OxLEP \(oxfordshirelep.com\)](https://oxfordshirelep.com) to central government. This will be an important placeholder for the development of Oxfordshire and the region from a local economic prosperity perspective. It also sets the scene as Oxfordshire being part of one of three regions with a very significant positive contribution in GVA to the Exchequer.

The Fourth Industrial Revolution in many respects holds a mirror to the development of Oxfordshire's Local Industrial Strategy. This confluence of digital, physical, and Bioscience aspects of industrial development typifies the opportunity for Oxfordshire to increase the pace of economic productivity. These are the areas of the most important technical and social change that the world will witness this century, building on the Personal Computing and www digital revolution of the late 20th century. The opportunity is enormous for those economies with the right mix of skills, infrastructure, and investment. The identifiable domains include artificial intelligence, robotics, nanotechnology, blockchain, quantum computing, IoT, 3D printing, autonomous vehicles, and biotechnology. These are all highly disruptive and likely to have a similar impact on society as the second industrial revolution of the late 19th century which saw mass automation displace jobs and huge population movements. For Oxfordshire this represents a significant opportunity for growth and wealth creation building on already well-established employment sectors.

The county has the expertise, skills, businesses, culture, and means of further skills development to create a highly developed, highly skilled, high value-add and well-

balanced economy to capitalise on this technological led change. We must however focus on ensuring the infrastructure is fit for purpose and '4IR Ready'. In this context no infrastructure is more important nor more relevant than digital infrastructure. Ubiquitous very high-speed affordable connectivity both fixed and mobile will be the lifeblood for ensuring opportunity is optimised. The building of this infrastructure will require significant investment both in cash terms and policy/planning/political terms.

Enabling & Planning Digital Infrastructure

The Future Telecoms Infrastructure review targets near 100% coverage of full-fibre broadband by 2033, and near full access to 5G mobile services. However central Government have accelerated this target and are currently aiming for 85% coverage with gigabit capable services by 2025. About 222,000 of Oxfordshire's 335,000 premises currently have gigabit capable infrastructure. This leaves in the region of 120,000 premises to be connected which, to meet government targets, at its height will mean the Project Gigabit programme will need to be connecting over 6,000 premises in Oxfordshire each month. As this is by definition new infrastructure delivered to the curtilage of premises, it represents a huge civils undertaking over several years.. Planning and collaboration among multiple public and private sector entities will be a key element in bringing this goal to reality, along with the need to consider significant new structure deployment for mobile 5G infrastructure. Planning consent, access to public sector assets such as street furniture, access to installing ducting in Oxfordshire's roads, paving, and verges will all require careful planning and noticing. This aspect will be a key output of the Digital Infrastructure Partnership and the role of Digital Infrastructure champions will be needed to help ensure there is a strong element of collaboration.

A focussed, collective, collaborative engagement with private sector Operators will be required to ensure Oxfordshire receives appropriate attention in bringing digital infrastructure investment into the county. We have to make it as easy as possible for Operators to see a return on investment, ease access to our highways, create standardised wayleave agreements, create non-restrictive access to our street furniture assets for deploying infrastructure, and be innovative in working with all utility companies to avoid multiple instances of civils work. Above all we must engage to show the unique opportunity Oxfordshire presents through the planned growth strategies we have underway, and the means of using the county as a Living Lab to trial technical innovation here. Specific measures are being taken to facilitate digital infrastructure provision, including;

Planning Permission

The Mobile Network Operators (MNOs) frequently cite they are prevented from installing mast infrastructure in the locations necessary to improve coverage, because of not being granted the necessary planning consent by the Planning

Authorities. OCC must ensure that encouragement is given to find ways to avoid this by bringing the MNOs together with the planning Authorities to seek alternatives

Public Sector Assets

OCC is investing in a significant street lighting replacement to replace existing traditional lights with LED's. Consideration is being given in this procurement to specifying street furniture which is suitable for mounting not just IoT sensors such as traffic monitoring, air quality sensors etc, but also small cell wireless capability. OCC have recently entered into an agreement with Freshwave to deploy small cell 5G capability onto lighting columns. Freshwave is an intermediary between the Mobile Network Operators (MNO's) and Local Authorities which facilitates access to assets useful to MNO's, both in deployment of small-cell and macro-cell (masts) on public land. Initially this is deploying two MNO's small-cell 4G/5G mobile transmitters on eight lighting columns in Oxford. As of April 2022 this is the first instance of two operators sharing the same street furniture in the UK and will improve mobile coverage for c 41% of people in the centre of Oxford. In line with OCC's requirements this is a neutral host commercial model which will maximise the strategic value of these assets, providing the right outcome (greater coverage from all mobile operators), rather than a short-term revenue opportunity. The potential use of public sector assets will include not just those assets owned by OCC, but the city and district councils too.

Facilitating Wayleaves

Experience gained in delivering the Better Broadband for Oxfordshire programme demonstrates that it is often easier for us a public body, to expedite telecoms related wayleaves, with private landowners. This is because we can provide context as to the community benefit achieved by installation of gigabit capable broadband. As Project Gigabit rolls out over the coming years there will be an marked increase in wayleave requests and the role of all councils in this will be crucial to government meeting their stated targets.

The Digital Infrastructure Programme is set up to encourage this collaboration;

- ✓ Formal partnership with Oxford City, Cherwell DC, West Oxfordshire DC, South Oxfordshire DC, Vale of White Horse DC, and OxLEP
- ✓ Partnership operational board meetings monthly
- ✓ Quarterly strategic boards
- ✓ MoU in place to formalise;
 - Consistent approach to Planning Guidance in respect of Digital infrastructure
 - Library (and map) of public assets which could be of use to Suppliers in improving infrastructure
 - Formal conduit to engage and manage all stakeholders
 - Collaborative funding approach

It should also be understood that council's themselves will be required to grant wayleaves for work on their own land and the volume of requests being received

may well be several times greater than they currently manage. This will almost certainly necessitate creating a standardised wayleave agreement for Operators to use that is agreed across all councils for work on their own land. To this end the Digital Infrastructure Team will work with both District Councils and Operators to help smooth the passage of these wayleaves through council legal teams.

Highways Access

With the rate of delivery of FTTP infrastructure between 2022 and 2026 averaging around 6,000 per month, the rate of applications from telecoms operators for permits to access our Highways is greatly increasing. The Digital Infrastructure programme is now funding a dedicated 'Broadband Champion' Highways inspector to interface with all broadband operators, assisting with highways applications and enabling a better approach to forward communication with residents about where works are scheduled.

Businesses

Whilst large enterprises are likely to continue to use leased line fibre connectivity due to the resilience and class of service incumbent with private high-speed connections, small and even medium sized businesses will benefit from access to full-fibre broadband. The Oxfordshire Better Broadband programme has targeted the enterprise zones and business parks in rolling out superfast broadband and we have ample [case studies](#) describing the huge benefit this has brought to businesses. As described in the Executive Summary, Oxfordshire has a much higher proliferation of digital, research, science, and technology companies. This profile of business has a particularly high dependency on world class digital connectivity for communicating with customers and their respective supply chains.

In general, the move to cloud-based applications and storage creates a demand for ever-faster broadband anyway, so when combined with the profile of businesses which have invested in Oxfordshire, the requirement for connectivity is amplified. Additionally, as the strategy for enshrining the so called 'brains' arc between Oxford and Cambridge gathers pace, it is important to use this investment opportunity to plan now for how digital infrastructure can be deployed. Examples include ensuring all new highways and rail links have fibre ducting and mobile infrastructure backhaul designed-in rather than needing to be retro-fitted. Consideration should be given to the fact that 1m new homes are planned to be built in the Arc and although this is understandably unpopular for environmental reasons, ensuring 21st digital infrastructure is installed at the build phase will significantly mitigate environmental impacts. More people will be able to work from home, reducing the amount of traffic on the roads; Full 5G infrastructure and electric vehicle charging points installed at the point of new-build will enable a future of electrically powered autonomous vehicles to be used on-demand; Intelligent buildings will optimise environmental controls reducing power consumption, these are just a few examples.

The [Oxfordshire Housing and Growth Deal](#) affords Oxfordshire an opportunity to strategically plan digital infrastructure provision alongside 'traditional infrastructure' creating a place where businesses want to invest and grow. We have the skills,

resources, academic institutions, planned housing, and potential world class digital connectivity that will enable this part of the UK to compete with anywhere in the world.

Targets

The Digital Infrastructure Programme has interim targets of achieving **99% superfast (minimum speed)** coverage by 2023 and **35% Full-fibre** coverage in the same timeframe.

Digital Infrastructure for Oxfordshire - Stakeholders

Members of Parliament

Parish	Name
Banbury	Victoria Prentis
Henley	John Howell
Oxford East	Anneliese Dodds
Oxford West & Abingdon	Layla Moran
Wantage	David Johnston
Witney	Robert Courts

Oxfordshire County Council

Name	Role
ClIrl Liz Leffman	Leader
ClIrl Glynis Phillips	Cabinet Member

Leaders of the City & District Councils

Parish	Name	Role
Oxford City	ClIrl Susan Brown	Leader of the Council
Cherwell	ClIrl Barry Wood	Leader of the Council
West Oxfordshire	ClIrl Michelle Mead	Leader of the Council
South Oxfordshire	ClIrl Sue Cooper	Leader of the Council
Vale of White Horse	ClIrl Emily Smith	Leader of the Council

Parish Councils

Parish	Name	Role
Abingdon-on-Thames Town Council	Mr Nigel Warner	Town Clerk
Adderbury Parish Council	Mrs Theresa Goss	Clerk
Adwell Parish Meeting	Thomas Birch Reynardson	Chairman
Alvescot Parish Council	Mrs C Hoad	Clerk
Ambrosden Parish Council	Gemma Jennings	Clerk
Appleford Parish Council	Gill Brook	Clerk
Appleton-with-Eaton Parish Council	Allison Leigh	Clerk
Ardington and Lockinge Parish Council	Dr C F Knights	Clerk
Ardley with Fewcott Parish Council	Mr Huw Jenkins	Clerk
Arncott Parish Council	Mrs Anne Davies	Clerk
Ascott-under-Wychwood Parish Council	Mrs Angela Barnes	Clerk
Ashbury Parish Council	Laura Evans	Clerk
Asthall Parish Council	Mrs Rita Gunn	Clerk
Aston Cote Shifford and Chimney Parish Council	Mrs E Anstee	Clerk
Aston Rowant Parish Council	Tracy Lambourne	Clerk
Aston Tirrold and Upthorpe Parish Council	Miss Sarah Brown	Clerk
Baldons Parish Council	Thomas James	Clerk
Bampton Parish Council	Mrs C Street	Clerk
Banbury Town Council	Mr Mark Hassall	Clerk
Barford St. John and St. Michael Parish Council	Mr David Best	Clerk
Baulking Parish Meeting	Mrs Jane Darling	Clerk
Beckley and Stowood Parish Council	Mrs Sue Cox	Clerk
Begbroke Parish Council	Mr Jeffrey Wright	Clerk
Benson Parish Council	Nicola Copland	Clerk
Berinsfield Parish Council	Mrs A. Loveland	Clerk
Berrick Salome Parish Council	Chris Cussens	Clerk
Besselsleigh Parish Meeting	Elaine Mckno-Floralis	Clerk
Bicester Town Council	Mrs Samantha Shippen, FCIS, Fellow ILCM, CMC	Clerk
Binfield Heath Parish Council	Mrs Marilyn Sermon	Clerk
Bix and Assendon Parish Council	Ms Jane Pryce	Clerk
Black Bourton Parish Council	Ms C V Cartwright	Clerk
Blackbird Leys Parish Council	Emma Kearney	Clerk
Blackthorn Parish Council	Tracey Charlesworth	Clerk

Bladon Parish Council	Mrs K Howe	Clerk
Blenheim Parish Meeting	Mr D Hare	Clerk
Bletchington Parish Council	Fiona Mason	Clerk
Blewbury Parish Council	Miss E Cooper	Clerk
Bloxham Parish Council	Theresa Goss	Clerk
Bodicote Parish Council	Corinne Hill	Clerk
Bourton (Faringdon) Parish Council	Mrs Maggie Brown	Clerk
Bourtons (Banbury) Parish Council	Mr Stephen Bowen	Clerk
Brightwell Baldwin Parish Meeting	Laura Gilroy	Clerk
Brightwell-cum-Sotwell Parish Council	Katie Fanstone	Clerk
Britwell Salome Parish Meeting	Julia Wells	Clerk
Brize Norton Parish Council	Mrs Jo Webb	Clerk
Broadwell Parish Meeting	Mr M Hough	Chairman
Broughton Parish Council	Mrs Christine Coles	Clerk
Bruern Parish Meeting	Mr Henry Astor	Chairman
Buckland Parish Council	David Page	Clerk
Bucknell Parish Council	Sue Mackrell	Clerk
Burford Town Council	Mrs M Andrews	Town Clerk
Buscot Parish Council	Jason Lindsey	Clerk
Carterton Town Council	Rachel Brown	Town Clerk
Cassington Parish Council	Mrs Tracey Cameron	Clerk
Caversfield Parish Council	Mrs Jane Olds	Clerk
Chadlington Parish Council	Ms Gill Hill	Clerk
Chalgrove Parish Council	Jo Murphy	Clerk
Charlbury Town Council	Lisa Wilkinson	Town Clerk
Charlton-on-Otmoor Parish Council	Samantha Hatwell	Clerk
Charney Bassett Parish Council	Mr Trevor Brown	Clerk
Chastleton Parish Meeting	Mr Garry Jones	Chairman
Checkendon Parish Council	Mrs C K Dunk	Clerk
Chesterton Parish Council	Sarah Kearney	Clerk
Childrey Parish Council	Mrs Debbie Lewis-Pryde	Clerk
Chilson Parish Meeting	Mrs Lucy Slater	Clerk
Chilton Parish Council	Mrs M E Morris	Clerk
Chinnor Parish Council	Ms Liz Folley	Clerk
Chipping Norton Town Council	Ms Luci Ashbourne	Town Clerk
Cholsey Parish Council	Lucy Dalby	Clerk
Churchill and Sarsden Parish Council	Ms Helen Tomalin	Clerk
Clanfield Parish Council	Ms L Scott	Clerk
Claydon with Clattercote Parish Council	Kirsty Buttle	Clerk
Clifton Hampden Parish Council	Mrs A Davies	Clerk

Coleshill Parish Council	Rosamund Webster	Clerk
Combe Parish Council	Mrs Julia Sharpe	Clerk
Compton Beauchamp Parish Meeting	Hamish McIntosh	Chairman
Cornbury and Wychwood Parish Meeting	The Lord Rotherwick	Chairman
Cornwell Parish Meeting	Ms T Bramwell	Secretary
Cottisford Parish Meeting	Mr I S Torrance	Chairman
Crawley Parish Council	Ms Sheena Derry	Clerk
Cropredy Parish Council	Mr David Best	Clerk
Crowell Parish Meeting	Lucy Newcombe	Chairman
Crowmarsh Parish Council	Mrs S Rance	Clerk
Cuddesdon and Denton Parish Council	Dr Michael J Mount	Clerk
Culham Parish Council	Mrs L Dalby	Clerk
Cumnor Parish Council	Ms Tina Brock	Clerk
Curbridge & Lew Parish Council	Mr Howard Higgins	Clerk
Cuxham with Easington Parish Meeting	Anna Grundberg	Chairman
Deddington Parish Council	Susan Fuller	Clerk
Denchworth Parish Meeting	Richard Starkey	Clerk
Didcot Town Council	Janet Wheeler	Town Clerk
Dorchester Parish Council	Mr G D Russell	Clerk
Drayton (Abingdon) Parish Council	Lorraine Watling	Clerk
Drayton (Banbury) Parish Council	G A Reynolds	Clerk
Drayton St Leonard Parish Council	Cassie Pinnells	Clerk
Ducklington Parish Council	Mr Richard Brown	Clerk
Duns Tew Parish Council	Jean Ralfe	Clerk
East Challow Parish Council	Miss Sheryl Sanders	Clerk
East Hagbourne Parish Council	Mrs Laura Lloyd	Clerk
East Hanney Parish Council	Wendy Quigley	Clerk
East Hendred Parish Council	Mrs Julia Evans	Clerk
Eaton Hastings Parish Meeting	Mr Raymond Bull	Chairman
Elsfield Parish Meeting	Mr James Plunket	Chairman
Enstone Parish Council	Mrs B Sinclair	Clerk
Epwell Parish Council	Christine Coles	Clerk
Ewelme Parish Council	Joanna Brock	Clerk
Eye & Dunsden Parish Council	Ms M Sermon	Clerk
Eynsham Parish Council	Mrs Katherine Doughty	Clerk
Faringdon Town Council	Sally Thurston	Town Clerk
Fawler Parish Meeting	Mrs E H Stacey	Chairman
Fencott and Murcott Parish Council	Lynne Bustin	Clerk

Fernham Parish Meeting	Mr Mike Winter	Clerk
Fifield Parish Meeting	Catherine Hitchens	Chairman
Filkins and Broughton Poggs Parish Council	Mrs Cris Hoad	Clerk
Finmere Parish Council	Sharron Chalcraft	Clerk
Finstock Parish Council	Mrs J Pratley	Clerk
Forest Hill with Shotover Parish Council	Helen Cross	Clerk
Freeland Parish Council	Fay Friend	Clerk
Frilford Parish Meeting	Shaun Forrestal	Chairman
Fringford Parish Council	Anne Davies	Clerk
Fritwell Parish Council	Caroline Westall	Clerk
Fulbrook Parish Council	Ms S Ebeling	Clerk
Fyfield and Tubney Parish Council	Dr Stephen Fraser	Clerk
Garford Parish Meeting	Mr Neil Wright	Clerk
Garsington Parish Council	Mrs Lorna Stevenson	Clerk
Glympton Parish Meeting	Mr D Hards	Clerk
Godington Parish Meeting	Ms Lucy Broome / Mr Dave Jenks	Co-Chairs
Goosey Parish Meeting	Mr Anthony Hayward	Vice-chair
Goring Heath Parish Council	Amanda Holland	Clerk
Goring-on-Thames Parish Council	Laura White	Clerk
Gosford and Water Eaton Parish Council	Karen East	Clerk
Grafton and Radcot Parish Meeting	Sue Kirby	Clerk
Great Coxwell Parish Council	Joanna Farrant	Clerk
Great Haseley Parish Council	Andrea Oughton	Clerk
Great Milton Parish Council	Mr Tim Darch	Clerk
Great Tew Parish Meeting	Ms Lucinda Webber	Clerk
Grove Parish Council	Graham Mundy	Clerk
Hailey Parish Council	Ms Lisa Wilkinson	Clerk
Hampton Gay and Poyle Parish Meeting	Kate Curtis	Vice-chair
Hanborough Parish Council	Mr Jon Gammage	Clerk
Hanwell Parish Council	Kate Nash	Clerk
Hardwick with Tusmore Parish Meeting	Mr David Barnes	Chairman
Hardwick-with-Yelford Parish Meeting	Mr Patrick Hook	Chairman
Harpsden Parish Council	Anne-Marie Scanlon	Clerk
Harwell Parish Council	Mrs Stephanie Taylor	Clerk
Hatford Parish Meeting	Dave Richardson	Clerk
Henley-on-Thames Town Council	Mr Sheridan Jacklin-Edward	Town Clerk

Hethe Parish Council	Mr David Jakeman	Clerk
Heyford Park Parish Council	Lorraine Watling	Clerk
Heythrop Parish Meeting	Mr E Riggs	Chairman
Highmoor Parish Council	Jean Pickett	Clerk
Hinton Waldrist Parish Council	Mrs Allison Leigh	Clerk
Holton Parish Council	Mrs S Barter	Clerk
Holwell Parish Meeting	Patricia Seligman	Chairman
Hook Norton Parish Council	Mrs Rosemary Watts	Clerk
Horley Parish Council	Mr D.M. Beck	Clerk
Hornton Parish Council	Fiona Donaldson	Clerk
Horspath Parish Council	Mrs Hayley Kogel	Clerk
Horton-cum-Studley Parish Council	Alexia Lewis	Clerk
Idbury Parish Meeting	Mrs Karen Pare	Chairman
Ipsden Parish Council	Mrs Moira Holloway	Clerk
Islip Parish Council	Emma Kearney	Clerk
Kelmscott Parish Meeting	Mr J Nelson	Chairman
Kencot Parish Meeting	Mrs Gill Cox	Clerk
Kennington Parish Council	Rachel Brown	Clerk
Kiddington with Asterleigh Parish Meeting	Mr J Goffe	Chairman
Kidlington Parish Council	Rachel Faulkner	Clerk
Kidmore End Parish Council	Mr R F Penfold	Clerk
Kingham Parish Council	Gemma Tindsley	Clerk
Kingston Bagpuize with Southmoor Parish Council	Sarah Bates	Clerk
Kingston Lisle Parish Council	Mrs Debbie Lewis-Pryde	Clerk
Kirtlington Parish Council	Ruth M Powles	Clerk
Langford Parish Council	Ms Caroline Parsons	Clerk
Launton Parish Council	Jane Olds	Clerk
Leafield Parish Council	Mrs A Ogilvie	Clerk
Letcombe Bassett Parish Meeting	Julie Davenport	Clerk
Letcombe Regis Parish Council	Mrs Elizabeth Jenkins	Clerk
Lewknor Parish Council	Ms Barbara Drysdale	Clerk
Little Coxwell Parish Council	Mrs Caroline Weston	Clerk
Little Faringdon Parish Meeting	Mr Tommy Abdy Collins	Acting Clerk
Little Milton Parish Council	Andrea Oughton	Clerk
Little Tew Parish Meeting	Mr C Hollander	Clerk
Little Wittenham Parish Meeting	Mr Graham Warrington	Chairman
Littlemore Parish Council	Richard Wilkins	Clerk
Littleworth Parish Meeting	Mr Tony Woodward	Clerk
Long Wittenham Parish Council	Martin Elliff	Clerk

Longcot Parish Council	Mrs Tina Brock	Clerk
Longworth Parish Council	Judy Roche	Clerk
Lower Heyford Parish Council	Cathy Fleet	Clerk
Lyford Parish Meeting	Mike Trippitt	Clerk
Lyneham Parish Meeting	Mr Howard Sherwood	Chairman
Mapledurham Parish Council	Mr R F Penfold	Clerk
Marcham Parish Council	Mrs L A Martin	Clerk
Merton Parish Council	Mrs Tracey Charlesworth	Clerk
Middle Aston Parish Meeting	Edward Dowler	Chairman
Middleton Stoney Parish Council	Liz Willmott	Clerk
Milcombe Parish Council	Theresa Goss	Clerk
Milton (Abingdon) Parish Council	Mrs Liz Cruse	Clerk
Milton (Banbury) Parish Meeting	Mr Alan Plumb	Chairman
Milton-under-Wychwood Parish Council	Lara Jacques	Clerk
Minster Lovell Parish Council	Ms A Molton	Clerk
Mixbury Parish Meeting	Mr R A Brunton	Clerk
Mollington Parish Council	Mr Geoff Hall	Clerk
Moulsford Parish Council	Mr Geoff Twibell	Clerk
Nettlebed Parish Council	Jo Pugh	Clerk
Newington Parish Council	Eva Goble	Clerk
Newton Purcell with Shelswell Parish Meeting	Mr Patrick Clarke	Chairman
Noke Parish Meeting	Erica Rifat	Clerk
North Aston Parish Meeting	Annie Savage	Secretary
North Hinksey Parish Council	Mrs Linda Morrison Allsopp	Clerk
North Leigh Parish Council	Ms Allison Leigh	Clerk
North Moreton Parish Council	Mr Andrew Wise	Clerk
North Newington Parish Council	Sarah Davison	Clerk
Northmoor Parish Council	Mr M Ryan	Clerk
Nuffield Parish Council	Karen Wheeler	Clerk
Nuneham Courtenay Parish Council	Geoffrey Ferres	Clerk
Oddington Parish Meeting	Dr Adrian Young	Chairman
Old Marston Parish Council	Tim Cann	Clerk
Over Norton Parish Council	Katie Llewellyn	Clerk
Piddington Parish Council	Mrs A Davies	Clerk
Pishill with Stonor Parish Council	Mrs P Pearce	Clerk
Prescote Parish Meeting	Mr Jonathan Seagroatt	Clerk
Pusey Parish Meeting	Andrew Douglas	Clerk
Pyrtton Parish Council	Ian Parker	Clerk
Radley Parish Council	Mrs Jane Dymock	Clerk
Ramsden Parish Council	Mr J Gammage	Clerk

Risinghurst & Sandhills Parish Council	David Adams	Chair
Rollright Parish Council	Ms Sue Glasson	Clerk
Rotherfield Greys Parish Council	Karen Wheeler	Clerk
Rotherfield Peppard Parish Council	Joanne Askin	Clerk
Rousham Parish Meeting	Mr C Cottrell-Dormer	Chairman
Saint Helen Without Parish Council	Anna Clarke	Clerk
Salford Parish Council	Sylvie McKay	Clerk
Sandford St Martin Parish Council	Ms Anne Ogilvie	Clerk
Sandford-on-Thames Parish Council	Julie Anderson	Clerk
Shellingford Parish Meeting	Roy Samways	Clerk
Shenington with Alkerton Parish Council	David Best	Clerk
Shilton Parish Council	Ms Gina Pearce	Clerk
Shiplake Parish Council	Mr Roger Hudson	Clerk
Shipton-on-Cherwell and Thrupp Parish Council	Sarah Kearney	Clerk
Shipton-under-Wychwood Parish Council	Ms L Wilkinson	Clerk
Shirburn Parish Meeting	Roger Beattie	Correspondent
Shrivenham Parish Council	Julia Evans	Clerk
Shutford Parish Council	David Best	Clerk
Sibford Ferris Parish Council	Kirsty Buttle	Clerk
Sibford Gower Parish Council	Kirsty Buttle	Clerk
Somerton Parish Council	Cathy Fleet	Clerk
Sonning Common Parish Council	Mr Philip Collings	Clerk
Souldern Parish Council	Cathy Fleet	Clerk
South Hinksey Parish Council	Geoffrey Ferres	Clerk
South Leigh Parish Council	Ms Nicky Brooks	Clerk
South Moreton Parish Council	Lucy Dalby	Clerk
South Newington Parish Council	Christine Coles	Clerk
South Stoke Parish Council	Laura White	Clerk
Sparsholt Parish Council	Mrs Deborah Lewis-Pryde	Clerk
Spelsbury Parish Council	Ms Anne Ogilvie	Clerk
Stadhampton Parish Council	Michael Pawley	Clerk
Standlake Parish Council	Mr Brian Parnham	Clerk
Stanford-in-the-Vale Parish Council	Claire Lewis	Clerk
Stanton Harcourt Parish Council	Ms Trudi Gasser	Clerk
Stanton St. John Parish Council	Julie Stoye	Clerk
Steeple Aston Parish Council	Cathy Fleet	Clerk
Steeple Barton Parish Council	Ms Annette Fowler	Clerk
Steventon Parish Council	Mrs Angela Einon	Clerk

Stoke Lyne Parish Council	Anne Davies	Clerk
Stoke Row Parish Council	Mrs Ina M Chantry	Clerk
Stoke Talmage Parish Meeting	Dr J Stonham	Clerk
Stonesfield Parish Council	Ms K East	Chair
Stratton Audley Parish Council	Mrs Anne Davies	Clerk
Sunningwell Parish Council	Brian Rixon	Clerk
Sutton Courtenay Parish Council	Helen Savery	Clerk
Swalcliffe Parish Council	Christine Coles	Clerk
Swerford Parish Council	Mr J Drinkwater	Clerk
Swinbrook and Widford Parish Council	Mrs L Harrop	Clerk
Swyncombe Parish Council	Ms Kristina Tynan	Clerk
Sydenham Parish Council	Heather Mullins	Clerk
Tackley Parish Council	Ms C Carruthers	Clerk
Tadmarton Parish Council	Christine Coles	Clerk
Taynton Parish Meeting	Mr H Thompson	Chairman
Tetsworth Parish Council	Linda Freeth	Clerk
Thame Town Council	Mandy Sturdy	Town Clerk
Tiddington-with-Albury Parish Council	Mrs Julie Stoyle	Clerk
Towersey Parish Council	Gregory Lismore	Clerk
Uffington Parish Council	Julie Evans	Clerk
Upper Heyford Parish Council	Sarah Morgan-Harris	Clerk
Upton Parish Council	Elizabeth Cooper	Clerk
Wallingford Town Council	Michelle Taylor	Town Clerk
Wantage Town Council	Mr W P Falkenau	Town Clerk
Warborough Parish Council	Bryony Ringsell	Clerk
Wardington Parish Council	Kirsty Buttle	Clerk
Watchfield Parish Council	Claire Arnold	Clerk
Waterperry with Thomley Parish Council	Mrs S Parker	Vice-Chair
Waterstock Parish Meeting	Rob Arthur	Chairman
Watlington Parish Council	Ms Kristina Tynan	Clerk
Wendlebury Parish Council	Sarah Kearney	Clerk
West Challow Parish Council	Mrs Deborah Lewis-Pryde	Clerk
West Hagbourne Parish Council	Andrew Wise	Clerk
West Hanney Parish Council	Barbara Martin	Clerk
West Hendred Parish Council	Mrs Julia Evans	Clerk
Westcote Barton Parish Meeting	Mr Rupert Massey	Clerk & Treasurer
Weston-on-the-Green Parish Council	Jane Mullane	Clerk
Westwell Parish Meeting	Mr Charles Verey	Chairman
Wheatfield Parish Meeting	Mr I R Mann	Chairman

Wheatley Parish Council	Michelle Legg	Clerk
Whitchurch-on-Thames Parish Council	Jane Yamamoto	Clerk
Wigginton Parish Council	Dr Coleen Weedon	Clerk
Witney Town Council	Mrs Sharon Groth	Town Clerk
Woodcote Parish Council	Ms Jenny Welham	Clerk
Woodeaton Parish Meeting	Dr P J Hore	Chairman
Woodstock Town Council	Marzia Sellitti	Town Clerk
Woolstone Parish Meeting	Ms Sarah Johnson	Clerk
Wootton (Abingdon) Parish Council	Wendy Quigley	Clerk
Wootton (Woodstock) Parish Council	Cris Hoad	Clerk
Worton Parish Meeting	Mr R D Bowerman	Chairman
Wroxton & Balscote Parish Council	Kate Brown	Clerk
Wytham Parish Meeting	Mrs Stella O'Gara	Clerk
Yarnton Parish Council	Mrs Lynne Whitley	Clerk

Local Enterprise Partnerships

LEP Area	Name	Role
OxLEP	Nigel Tipple	Chief Executive
SEMLEP	Hilary Chipping	Chief Executive
SEMLEP	Peter Horrocks, CBE	Chair

Trade Bodies

Parish	Name
Banbury	Thames Valley Chamber of Commerce
Witney	Witney Chamber of Trade and Commerce
Buckinghamshire & Oxfordshire	NFU Berkshire