Wolverhampton Digital Infrastructure Evidence Base

November 2024

To support the Wolverhampton Local Plan (Regulation 19)

1.   Introduction

1.1   Government guidance relating to the rollout of futureproofed digital connectivity (see Appendix 1) recognises the role Local Plans can play, outlining how planning policies will support the rollout of both fixed and mobile infrastructure. Local Plans should include policies that will support the future of fixed network and mobile connectivity and the rollout of small cells for 5G which is most likely to be needed in dense, urban areas. This is important as all formal planning applications will be assessed against the Local Plan.

2.   Promoting Fibre to the Premise (FTTP) or Full Fibre

2.1   Despite relatively strong superfast and ultrafast broadband coverage across Wolverhampton, full fibre broadband is the future of connectivity increasing speeds to 1GB.   This will meet future demands for connectivity as highlighted by a 50% increase in demand each year and wider economic and service delivery benefits as well as backhaul for 5G.

Superfast	Up to 30Mbps
Ultrafast	Up to 300 Mbps
Full Fibre	Up to 1 Gbit/s

2.2   The coverage of full fibre broadband has increased significantly over the past four years from a very low starting point with Wolverhampton at 83.79% compared to the UK average of 69.86%. Gigabit coverage is also high with Wolverhampton at 96.82% (Think Fibre September 2024). However, with Project Gigabit focusing on rural areas, it is crucial that policies are adopted that facilitate the rollout.

Full Fibre Coverage

| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
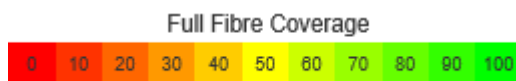
2.3   Fast, reliable digital connectivity is essential in today's economy supporting every aspect of how people work and take part in modern society, helps smart innovation and facilitates regeneration. Demand for internet capacity is increasingly significantly each year due to internet traffic growth, video on demand, cloud services, 5G backhaul, reliability and the explosion of IOT devices, therefore Wolverhampton needs to future proof its digital infrastructure.

2.4   At the local level, the availability, reliability and speed of broadband provision is a key consideration for house buyers with many viewing it as essential as standard utilities.

What can a family do with different download speeds at home

While a decent broadband or a 3G mobile connection will enable basic web browsing, if a family wants to enjoy increasingly high definition videos such as 4K (Ultra HD) via demand services such as Netflix or BBC iPlayer, they will need a faster connection, especially if several people in a family are using different services at the same time.

Activity	'Decent'	'Superfast'	'Ultrafast'	'Full-Fibre'	3G	4G	5G
Whole family browsing internet/ checking emails	Green	Green	Green	Green	Green	Green	Green
One person streaming music	Green	Green	Green	Green	Green	Green	Green
One person video calling such as iPhone Facetime	Green	Green	Green	Green	Amber	Green	Green
Streaming a movie by itself	Green	Green	Green	Green	Amber	Green	Green
Streaming music and a movie at the same time	Amber	Green	Green	Green	Red	Amber	Green
Streaming a 4K movie by itself	Red	Green	Green	Green	Red	Red	Green
Streaming a 4K movie, music and playing games at the same time	Red	Amber	Green	Green	Red	Red	Green

Similarly, it is also a key concern for the business sector. Research by the Federation of Small Businesses found 94% of small business owner rate a reliable broadband connection as critical to the success of their business. A survey conducted by the Confederation of British Industry found 81% of firms said they see more reliable mobile connectivity as essential.

Activity	'Decent'	'Superfast'	'Ultrafast'	'Full-fibre'
Checking emails	Green	Green	Green	Green
Editing a website	Green	Green	Green	Green
One-person video calling	Green	Green	Green	Green
Backing up to the cloud or uploading big files	Amber	Green	Green	Green
Support more than 5 online employees	Red	Amber	Green	Green
Support more than 10 employees	Red	Amber	Amber	Green

2.5 Greater investment in broadband infrastructure is one of the five key tenants for the Black Country Chamber of Commerce's Get the Midlands Moving Campaign which recognised faster broadband role in ensuring businesses remain competitive. The connectivity commercial impact report demonstrated that connectivity in commercial premises increases market appeal, increases current and prospective tenant demand and could lead to the potential for increased rent and reduced voids (Cluttons 2019).

2.6 Despite the benefits to developers and end-users, full fibre is not always being built into new residential and commercial properties.

2.7   Planning policy can play a role in helping to achieve the transformation in broadband. The National Planning Policy Framework clearly recognises this and supports the delivery of advanced, high-quality communications infrastructure and the expansion of full fibre broadband where possible. See Appendix 1.

Recommendation: New residential and commercial development should enable full fibre broadband, where viable, as the 4th utility. Developers are not required to deliver the full fibre solutions themselves since the majority of infrastructure developers will install fibre for free or at minimal cost for developments above a certain size. Alternatively, developers should ensure that sufficient ducting space for full fibre connectivity infrastructure is provided.

3.   Wireless Connectivity

3.1   Wireless connectivity covers a range of technology including technology on rooftops, high rise aerials, small cell technology and WiFi meshes. 5G is mobile internet as fast as fibre with speeds up to 1GB with huge capacity to connect thousands of uses and devices at consistently ultrafast speeds. It is ultra-reliable, secure and low latency (doesn't drop connections) which could be transformational for industry.

3.2   5G will bring faster, more responsive and reliable connections than ever before with the potential to improve the way people live, work and travel, and to deliver significant benefits to the economy and industry. It will enable new services and applications including:

- faster mobile broadband and a more consistent experience in congested areas with a very high number of devices
- industrial applications, enabling businesses to improve their productivity, for example through predictive maintenance and real-time analytics
- Internet of Things (IoT) services, many of which will help councils and businesses deliver services more efficiently including:
     o   transport and logistics: connected parcels and fleet tracking
     o   health and social care
     o   environmental monitoring: sensors monitoring air quality and water pollution in real-time
     o   smart retailing
     o   connected and autonomous cars: allowing cars to communicate with each other, other road users and even the road infrastructure

3.3   The report by Barclays Corporate (*5G: A Transformative Technology*, April 2019) suggests that 5G has the potential to boost:

- aggregate UK business revenues by up to £15.7 billion by 2025 and by up to £89.6 billion by 2030 (2018 prices);

- the size of the UK economy (GDP) by up to 1.54% relative to a situation in which a national 5G network does not develop;
- worker productivity through greater collaboration and by enabling people with accessibility challenges to re-join the workforce, vital in the context of the UK's ageing population.

3.4   Currently, the Black Country has good coverage of 4G with all four mobile network operators (MNOs) rolling out 5G in the Black Country.

3.5   In order to deploy 5G and improve coverage in partial not-spots, mobile network operators will need to strengthen existing sites to accommodate additional equipment. To extend coverage into total not-spots or to add capacity in areas of high demand, mobile network operators will also need to identify and develop new sites.

3.6   Initially the upgrade focused on rooftop sites, however increasingly it will involve upgrades of masts on highways. Masts need to be sited to maximise coverage and ensure residents and businesses can get good signals. In addition, to enable 2G, 3G, 4G and 5G to be on the same masts, masts need to be higher than previously.

3.7   The Government has recently consulted on proposed reforms to permitted development rights to support the deployment of 5G and extend mobile coverage.

3.8   Telecoms Code of practice https://www.mobileuk.org/codes-of-practice recommends Mobile Network Operators hold pre-application dialogue with planning authorities; communication and consultation with local communities; and especially in the case of new sites, that equipment is sympathetically designed and camouflaged where appropriate, in line with principles set out in the NPPF and relevant adopted local planning policies. Planning authorities should be commit to supporting the expansion of electronic communication networks taking into account local economic development, digital connectivity, sustainability, and social inclusion considerations; facilitating sites; pre-applications discussions including guidance or advice on design considerations; provide information on forthcoming infrastructure plans such as major new developments; work with Mobile Network Operator to find solutions where resolvable issues are raised

3.9   All Black Country authorities are supporting the rollout of futureproofed digital infrastructure with some identifying Digital Champions and Co-ordinators.

3.10   MNOs should consider factors affecting the visual impact of new electronic communications infrastructure to be location and design. Siting and design of the infrastructure needs to be sensitive with infrastructure designed to be as unobtrusive as possible, minimising the contrast between the infrastructure

and its surroundings, considering colour of equipment and landscaping/ screening of infrastructure.

3.11   For significant large developments, developers may wish to consider siting for new telecoms infrastructure to ensure coverage if required.

3.12   Commercial buildings should also ensure full fibre and/or ducting at build stage and may also wish to consider the installation of inbuilding infrastructure for 5G.

Recommendation:

Local authorities updated guidance document on the siting and design of telecommunications infrastructure and/or a design code.

Pre-applications discussions between MNOs and planning authorities are encouraged.

4.   Digital Inclusion

4.1   Despite the importance of future proofed digital infrastructure, we recognise that not all residents can take advantage of it due to lack of motivation or skills, lack of devices or data poverty. Partners across Wolverhampton and the wider Black Country are proactively supporting residents to get online ranging from device and connectivity donation, lending and recycling schemes as outlined in emerging local authority digital inclusion plans and initiatives such as Black Country Connected for a Healthier Future. These are further enhanced by activities of the voluntary community sector and learning providers to support residents to get online and improve their digital skills.

Appendix 1

Considerations for the local planning authority

How can the local planning authority support the rollout of fixed and mobile networks at the local level?

Contents

Local planning authorities have a crucial role in the deployment of fixed and mobile infrastructure at the local level.* Local planning authorities should make decisions for digital infrastructure in a timely manner and, where possible, should discuss operators' deployment plans well in advance.

*It is noted that planning is a devolved matter, and legislation varies in each nation.

National Planning Policy Framework

Applies to: England
The National Planning Policy Framework chapter 10 states that local planning authorities:

should support the expansion of electronic communications networks, including next generation mobile technology (such as 5G) and full fibre broadband connections.

Policies should set out how high quality digital infrastructure, providing access to services from a range of providers, is expected to be delivered and upgraded over time; and should prioritise full fibre connections to existing and new developments (as these connections will, in almost all cases, provide the optimum solution).

Local Plans

Local authorities can help to create incentives for future investment in digital infrastructure in their area by ensuring Local Plans effectively support it. To do this, Local Plans can outline how planning policies will support the rollout of both fixed and mobile infrastructure.

This could include policies that will support the future of mobile connectivity and the rollout of small cells for 5G which is most likely to be needed in dense, urban areas. This is important as all formal planning applications will be assessed against the Local Plan.

For example, a Local Plan could ensure that all new developments have sufficient ducting space for full fibre connectivity; and/or support the effective use of rooftops

and street furniture to accommodate mobile digital infrastructure, including small cells for 5G.

Early engagement and pre-application consultations

Local authorities and industry are encouraged to engage at the earliest opportunity to discuss deployment plans to minimise costs, time and uncertainty associated with the planning process for the deployment of fixed and mobile infrastructure.

Feedback from industry and local authorities suggests that pre-application consultations can help to streamline the planning application process and maximise the chances of applications being approved. While it is the responsibility of the potential applicant to undertake pre-application consultations, local planning authorities can help to make sure these are used effectively to support the rollout of networks.

For example, local planning authorities could provide communications network providers with detailed feedback on initial plans for deployment and offer a meaningful response, which could be used to inform the formal planning process. Local planning authorities are also encouraged to provide pre-application services at a rate that encourages early engagement to support timely and effective planning processes. Some local planning authorities have chosen not to impose a fee for pre-application consultations.

Coordination between the local planning department and highways department

Effective rollout of digital infrastructure relies on coordination and communication within local authorities. If the planned deployment is likely to impact the road network, the digital champion in local authorities is encouraged to engage early and regularly with the local highways authority during the planning process, using the process as outlined in the Street Works Toolkit.

https://www.gov.uk/guidance/considerations-for-the-local-planning-authority