

## **BARNSELY METROPOLITAN BOROUGH COUNCIL**

**This matter is a Key Decision within the Council's definition and has not been included in the relevant Forward Plan**

**REPORT OF THE  
EXECUTIVE DIRECTOR PLACE  
TO CABINET**

### **South Yorkshire Digital Connectivity Strategy**

#### **1. PURPOSE OF REPORT**

- 1.1. The purpose of this report is to seek approval for the adoption of the South Yorkshire Digital Connectivity Strategy and, in principle, the programme of activities and projects proposed within it. These activities and projects will improve digital connectivity in Barnsley and wider city region, so that coverage, choice and speed of communication stays ahead of demand; and so that connectivity enables residents and businesses to use digital solutions to improve their lives and to sustain, grow and create new business.

#### **2. RECOMMENDATIONS**

- 2.1. **Adopt the South Yorkshire Digital Connectivity Strategy and the 'direction of travel' set out therein.**

#### **3. INTRODUCTION**

##### **3.1. Barnsley's Current Digital Connectivity Landscape**

- 3.2. Barnsley is well served by the current generation digital connectivity technology. For example, coverage of Superfast Broadband (fixed line broadband that is capable of download speeds of 30Mbps) is at 97.1% of the borough and coverage of 4G (cellular broadband with average download speeds from 16 to 33Mbps) ranges from 81% to 92% of the borough depending on network operator.
- 3.3. However, both Superfast Broadband and 4G technologies are incapable of meeting future demands for speed, capacity, reliability, and responsiveness; and are fast approaching end of life. Indeed, Openreach and the Government have both announced plans to phase out copper based Superfast Broadband infrastructure.
- 3.4. The next generation of digital connectivity technology is full fibre networks and 5G cellular networks.
- 3.5. Full fibre networks dispense with copper wire and traditional street cabinets. They provide a direct connection from a property to an exchange using glass fibre and are capable of download speeds in excess of 1,000Mbps.

- 3.6. 5G uses a new radio interface that along with other new technologies, enable much higher radio frequencies to be used. This enables significantly more data to be carried over the air for faster speeds, reduced congestion and lower latency. At launch, 5G download speeds are expected to start at 150Mbps, eventually becoming as fast as 1,000Mbps plus.
- 3.7. Only these new technologies are capable of meeting the future demands for speed, capacity, reliability, and responsiveness required by residents, businesses and the public sector in order to use modern digital services. With copper and early generation cellular networks soon being phased out, we are at risk of becoming 'cut off' - unable to use the applications, products and services that communicate on modern networks. This will increase the digital divide, with more people unable to benefit from the social, health, educational and financial benefits of being online.
- 3.8. Unfortunately, Barnsley is not well served by this next generation of digital connectivity technology. At time of writing, full fibre network coverage in Barnsley is only 3.99%. Nationally, the figure is 10.4% coverage.
- 3.9. Barnsley has not been named in Openreach's "Fibre First" plans, a programme to deploy full fibre networks in over 70 UK towns
- 3.10. Barnsley has not been named in City Fibre's "Gigabit Cities" plans, a programme to deploy full fibre networks in 26 locations
- 3.11. No Mobile Network Operators, have announced that Barnsley will be included in their initial 5G roll out plans
- 3.12. It will take several years and several iterations of the technology before 5G technology is fully deployed.
- 3.13. 5G is dependent on full fibre coverage, requiring significant fibre backhaul.

## **4. PROPOSAL AND JUSTIFICATION**

### **4.1. How the Council Could Improve Digital Connectivity in Barnsley**

- 4.2. Following almost a decade of austerity and year on year reductions in central government funding, combined with rising pressures for both children's and adult's social care; the Council's ability to fund digital connectivity from its core budget is limited.
- 4.3. However, we believe improvements can still be achieved by leveraging our position as an anchor institution with significant assets and influence on regional policy and strategy. The Digital Connectivity Strategy, set out in the Appendix, sets out a vision for digital connectivity in South Yorkshire, achievements to date and plans for building on these over the next 3 years utilising:
  - Arrangements such as concession contracts or alternative forms of agreement that will offer use of council owned assets in exchange for a rental income and some form of digital connectivity service;

- Applications for funding from Government, Sheffield City Region and other external sources;
- Publicising and promoting our strengths and achievements because an enhanced profile and reputation based on world class digital connectivity will help attract business and inward investment to Barnsley - one of the reasons why this Digital Connectivity Strategy is important is that it makes a clear statement of our intent to the market which will increase our chances of attracting those companies who want to make investments in relation to fibre, 5G and other digital connectivity;
- Establishing and maintaining closer working relationships with the private sector, sharing information, helping each other, innovating, ensuring that public sector interventions complement those of the private sector;
- Adopting a pro investment, barrier busting approach to wayleaves, planning and highways to provide the conditions required by network operators to install full fibre, 5G and other telecommunications infrastructure quickly, efficiently and effectively in the Barnsley
  - Full fibre network infrastructure providers need help from Local Authorities to remove barriers to deployment. Pragmatic approaches to highways, planning and wayleaves will increase speed and coverage of full fibre network deployment.
  - There is much for the Council to do to ensure that Barnsley continues to benefit from each improvement in the speed and coverage of 5G.

4.4. Most of our achievements to date have been delivered in partnership with our Local Authority Partners through the Superfast South Yorkshire programme. We will continue to collaborate in this way where this helps to deliver our strategic objectives.

4.5. We will also collaborate with our regional partners in Academia, Health, Police, Commerce and other sectors in order to implement the aims and objectives of the strategy, to enable further downstream benefits to be delivered, and to ensure that South Yorkshire moves towards being recognised as one of the country's best connected regions.

#### **4.6. Activities and Projects**

4.7. The Digital Connectivity Strategy includes a number of proposals for improving digital connectivity in South Yorkshire that will be pursued over the next 3 years including:

- Seek further investment in the Superfast South Yorkshire programme;
- Promote Government connection voucher schemes;
- Produce a transport network digital connectivity plan;
- Seek further investment in business support programmes;
- Ensure Council enabled networks can be used as accessible innovation test beds;
- Establish a region wide register of public assets that can be used to improve digital connectivity;
- Establish a single point of contact responsible for enabling the private sector to reuse these assets;
- Maintain and extend public owned infrastructure such as duct;
- Arrangements such as a concession contract or alternative form of agreement for an open access 5G infrastructure;

- Seek to introduce a policy that will require developers to provide full fibre access at new sites (superfast only if they can demonstrate that full fibre is not feasible);
- Publish a digital connectivity charter describing how the Council will adopt a pro-investment, barrier busting approach to wayleaves, planning and highways;
- Arrangements such as a concession contract or alternative form of agreement for an Internet of Things (IoT) infrastructure;
- Fund IoT demonstrators that illustrate the art of the possible in different sectors;
- Arrangements such as a concession contract or alternative form of agreement for free of charge public access wi-fi;
- Try to find a way of providing free of charge/reduced cost basic internet access in social housing.

4.8. Where further decisions are required to implement these proposals these will be subject to future approvals as applicable.

#### **4.9. HOW DOES THIS DECISION CONTRIBUTE?**

4.10. The Digital Connectivity Strategy has an ambitious vision; that by 2021 South Yorkshire will be recognised as one of the best connected regions in the country: where coverage, choice and speed of communication stays ahead of demand; and where connectivity enables residents and businesses to use digital solutions to improve their lives and to sustain, grow and create new business.

4.11. The Digital Connectivity Strategy has 9 Strategic Objectives, these are:

- To deliver access to superfast broadband for 100% of South Yorkshire;
- To deliver access to full fibre at every major business location;
- To deliver digitally connected public and private transport networks;
- To stimulate demand and encourage innovation;
- To exploit publicly owned assets and infrastructure;
- To establish South Yorkshire as a 5G-ready region;
- To become an industry recognised, pro-investment, barrier busting region;
- To establish a region-wide internet of things network;
- To provide free internet access in council owned social housing, outdoor spaces and potentially other council owned buildings.

4.12. It is anticipated that these strategic objectives will deliver the following benefits:

- To ensure that no one is excluded from the digital age and the socio-economic benefits of being online;
- To meet the demands from an increasing resident population, ensuring sufficient network capacity;
- To enable businesses to be more productive and more competitive;
- To sustain and grow the digital sector, in new and emerging technologies;
- To provide ubiquitous coverage, so that residents, workers and visitors are always connected;
- To facilitate rapid adoption of smart services such as 5G, Internet of Things (IoT), Connected Vehicles;
- To enable public services to be delivered more efficiently, more effectively, and to be accessible online;
- To create jobs, to learn and apply the skills needed for the infrastructure, products and services;

- For smart city solutions that improve energy use, public safety, traffic management and air quality;
- To establish South Yorkshire's reputation as a 'go to' place for innovators, researchers and investors;
- To gain a competitive advantage from ensuring supply is available ahead of demand; and,
- To meet consumer demand for higher bandwidth for video streaming, gaming, home working.
- The Sheffield City Council Digital Connectivity Strategy was approved 18/09/2019
- DMBC and RMBC are in the process of adopting the South Yorkshire Digital Connectivity Strategy

## **5. CONSIDERATION OF ALTERNATIVE APPROACHES**

### 5.1. Do Nothing

5.2. The Council could choose not to adopt and implement the Digital Connectivity Strategy and to allow the market to determine the speed and coverage of next generation digital connectivity; it could choose not to work with the market to reduce barriers to investment; and it could choose not to directly intervene through, for example, concession contracts (or alternative forms of agreement).

5.3. However, history has shown that without public sector intervention, the market is slow to deploy infrastructure, particularly in less affluent areas of the region.

5.4. Public Sector Interventions since 2014 have achieved the following:

- Coverage of superfast broadband has increased from 80% to over 97% and will reach 99% of premises by 2021;
- Take-up of superfast broadband has increased to over 50%;
- South Yorkshire's business parks were amongst the first in the country to access full fibre, gigabit, broadband;
- Business support programmes have helped SMEs use digital to sustain and grow their business;
- SMEs have received vouchers for half price connection and for half price innovation projects;

5.5. The do nothing option is not recommended because, were the Council to choose not to intervene, it is likely that coverage of full fibre and 5G in South Yorkshire would continue to lag significantly behind the rest of the country, with many other regions competing to attract the limited resources of the market to their own areas.

## **6. IMPLICATIONS FOR LOCAL PEOPLE/SERVICE USERS**

6.1. The Digital Connectivity Strategy provides a framework for delivering a range of benefits for local businesses and residents. Examples include:

- Improved health and well-being through remote health monitoring, better communications and access to health services;
- Reduced isolation as access to the Internet can help improve communication and social engagement;

- Improved education outcomes through the use of web-based learning materials;
- Better employability through more effective job hunting and the ability to work remotely;
- The ability to access public services which are increasingly available online (such as applying for Universal Credit);
- Access to savings and discounts offered through online shopping (estimated at over £500 per year).

## **7. FINANCIAL IMPLICATIONS**

- 7.1. The Digital Connectivity Strategy will be implemented using: existing Council resources and commitments; in partnership with sub regional and regional partnerships; and, through innovative relationships with the private sector. This will require the use of the revenues generated from concession contracts (or alternative forms of agreement such as contracts, leases or wayleaves).
- 7.2. This report seeks approval for the strategy to implement digital connectivity and does not commit the Council to additional net expenditure. The intention is that any costs that might be incurred, in any of the Council's departments, will be defrayed by the income generated from the various concessions, leases and wayleaves agreements that may be negotiated with partners. The choice of the most appropriate agreement will be made in accordance with the Council's decision making processes at the time.

## **8. EMPLOYEE IMPLICATIONS**

- 8.1. There are no direct employee implications arising from the adoption of this strategy.

## **9. LEGAL IMPLICATIONS**

- 9.1. There are no direct legal implications associated with the adoption of the Digital Strategy.

## **10. CUSTOMER AND DIGITAL IMPLICATIONS**

- 10.1. Domestic internet traffic will continue to grow in the future as multiple family members use increasing numbers of internet services in their daily lives. For example, on line gaming in high definition; streaming of music, video and catch up TV; voice calling, video calling, wearables, smart speakers and other connected devices combine to create ever increasing demands on bandwidth.
- 10.2. Video on Demand is a massive growth area in the US and the UK. High Definition content streams at 8Mbps and 4k Ultra High Definition content streams at 32 Mbps which exceeds the UK definition of Superfast Broadband. Also where 4G connections tend to offer download speeds of around 20Mbps (which is fast enough to download a HD movie in 30 minutes), 5G is expected to surpass that by orders of magnitude: 500 to 1,500 Mbps (fast enough to download the same film in 25 seconds).
- 10.3. A 2018 study for Ofcom found that up to 40% of UK households could demand at least 1Gbps download speeds and 600Mbps upload speeds by 2025. Under a less aggressive scenario, the study estimated that 8% of households would require

Gigabit bandwidth by 2025, and that more than 50% would require download speeds of at least 300Mbps

## 11. COMMUNICATIONS IMPLICATIONS

11.1. We are working up a communication plan anticipating the adoption of the Digital Connectivity Strategy

## 12. CONSULTATIONS

12.1. The Digital Connectivity Strategy is the product of over 12 months' worth of consultation and collaboration with the fixed line infrastructure providers, mobile network operators, shared infrastructure providers, government departments, specialist consultancies, public sector partners throughout the city region, academia and the private sector.

## 13. THE CORPORATE PLAN AND THE COUNCIL'S PERFORMANCE MANAGEMENT FRAMEWORK

13.1. The corporate performance indicator for broadband is **CO38 % take up of superfast broadband**

## 14. HEALTH, SAFETY AND EMERGENCY RESILIENCE ISSUES

14.1. There are no direct implications associated with the adoption of the strategy

## 15. LIST OF APPENDICES

Appendix 1: South Yorkshire Digital Connectivity Strategy

## 16. BACKGROUND PAPERS

If you would like to inspect background papers for this report, please email [governance@barnsley.gov.uk](mailto:governance@barnsley.gov.uk) so that appropriate arrangements can be made

**Report author:** Martin Owens

Financial Implications/Consultation



.....