

Bath & North East Somerset Council

MEETING/ DECISION MAKER:	Cllr Paul Roper, Cabinet Member for Economic and Cultural Sustainable Development	
MEETING/ DECISION DATE:	On or after 13th January 2024	EXECUTIVE FORWARD PLAN REFERENCE: N/A
		E 3501
TITLE:	ONE WORD 5G MOBILE NETWORK PILOT PROJECT	
WARD:	Kingsmead, Bathwick, Widcombe and Lyncombe	
AN OPEN PUBLIC ITEM		
List of attachments to this report: Appendix 1: ONE WORD 5G Mobile Network Project Overview		

1 THE ISSUE

B&NES currently lags behind regional and national comparators in terms of digital connectivity, and the city of Bath suffers from poor mobile connectivity, capacity, and not-spots, especially in “high demand” time periods.

The ONE WORD 5G Mobile Network Pilot is funded by the Department for Science, Innovation and Technology and grant funding has been offered to B&NES for £773k which the aim to improve connectivity and boost the local economy by providing a new cutting-edge mobile network directly in the historic centre of Bath.

2 RECOMMENDATION

The Member is asked to;

- 2.1 Support the ONE WORD 5G Mobile Network Project and approve Bath & North East Somerset’s role as a partner to deliver the project.
- 2.2 Agree to accept £773k of government grant funding for the project.
- 2.3 Approve the installation of 5G apparatus on Council assets including Street Furniture such as CCTV and lighting columns.

- 2.4 Fully approve capital budget of £773k funded by government grant to deliver the ONE WORD 5G Mobile Network Project.

3 THE REPORT

- 3.1 B&NES currently lags behind regional and national comparators in terms of digital connectivity, and while the City of Bath benefits from better broadband connectivity than North East Somerset, the city also suffers from poor mobile connectivity, capacity and not-spots, especially in “high demand” time periods.
- 3.2 There is currently a market failure in the sector, with lack of investment from private telecoms companies which is exacerbated by UK Government restricting some international vendors. As a result, the Department for Science Innovation and Technology have issued a series of Open Network Ecosystem (ONE) funding calls to unlock investment in new next generation open mobile networks that multiple vendors can share.
- 3.3 The City of Bath will require various different technologies to become a Smart City and remove the “not-spots” that currently act as a barrier to connectivity and growth. Mesh and mobile will compliment more traditional fibre in order to navigate challenges related to the city’s heritage assets, therefore attracting public funding to demonstrate the effectiveness of such technologies is critical to stimulate further investment by the commercial sector. Without such investment, we risk Bath & North East Somerset being left behind economically as physical and human capital invest in alternative locations that offer “future-proofed” levels of high-speed digital connectivity.
- 3.4 B&NES also suffers from digital exclusion, with residents reporting coverage, cost, skills and confidence being barriers to accessing services and employment online¹. Digital exclusion is now one of the key work strands being picked up by the Future Ambitions Board.
- 3.5 The ONE WORD (Western O-RAN Deployment) 5G Mobile Network Pilot aims to improve connectivity and boost the local economy as a result of providing a new cutting-edge mobile network directly in the historic centre of Bath. A briefing paper is attached in Appendix 1 which provides more detail on the pilot.
- 3.6 ONE WORD is an 18 month pilot which will be led by mobile telecoms company Telet, in partnership with B&NES Council. We are part of a consortium which includes other local authorities in the UK and will deploy 5G technologies in four locations across the country: Bath, Cardiff, Shrewsbury and Worcester. ONE WORD received funding from the Department for Science, Innovation and Technology.

- 3.7 The project supports the new Council Corporate Strategy and emerging Economic Strategy through boosting connectivity, reducing exclusion and unlocking innovation.
- 3.8 The project is roughly £14.5 million in value, of which around £10 million comes from Government funding and includes £773,132.00 for Bath & North East Somerset Council. The project aims to provide the City of Bath with a new next generation 5G network by installing a network of around 20 small cell radio units. Once installed, the project will focus on testing how the network copes with high demand and dense environment in order to provide a blueprint for future deployments in the city, both by the council and commercial mobile network providers.
- 3.9 The exact locations of the small cells are yet to be determined, however the new 5G network is expected to cover the historic centre of Bath; Queens Square to the North, Bath Spa Railway Station to the South, Bath Rec to the East and Avon Street to the West. Survey work will confirm exact locations of the small cells, and street furniture such as CCTV and street lighting columns will host them. New and existing fibre backhaul will link the cells from a data centre to be housed in Bath Guildhall.
- 3.10 The pilot also references management of networks in heritage environments; thus any new technologies and equipment will be designed to be in keeping with sensitive locations in order to balance the needs of both conservation and connectivity.
- 3.11 The first six months of ONE WORD will focus on statutory considerations, build out, and then move into the network testing stage. The network will not be publicly available during the pilot phase and will require a specific sim card for users to test the network. At least 200 high-specification handsets will be provided to testers in order to test the network's resilience and performance in managing high demand locations.
- 3.12 Two indoor locations, the Roman Baths and Bath Rugby Stadium, have been identified as options to install additional radio units to test the network and build out the use cases for next-generation mobile technology. This could include both AI and AR applications to improve customer experiences at both sporting and cultural experiences.
- 3.13 A number of test events will also take place where users place high demand on the network at the same time and location, with the potential for more realistic testing to occur during future events such as sports fixtures and the Bath Christmas Market. We will involve local residents in the project by providing access to the handsets and supporting them with training and assistance to take part in testing.
- 3.14 Throughout the testing phase until March 2025, improvements to the networks operations, energy use, speed and efficiency will be made in order to provide

guidance to local and national providers on deployment of new mobile networks. As another partner in the project consortium, the West of England Combined Authority will support with policy and communications.

- 3.15 Following the end of the pilot, the network will be available publicly, with a variety of options available to B&NES Council. One of which would be the leasing of the network to commercial mobile network operators for use by their customers. An alternative approach could be retained control of part/all of the network and directly providing a service. A full cost/benefit analysis of these options will be undertaken as part of the pilot project.
- 3.16 Whilst the scope of the initial pilot focuses on the City of Bath, there is potential for additional networks to be added to the high streets of Keynsham and Midsomer Norton, increasing the benefits of the improved digital connectivity, coverage and speed across the authority area. Officers within the council are in discussions with the ONE WORD project lead partners to bring this forward. Likewise, following the pilot project ending, a review of expanding the central network to a wider area of Bath will be considered based on project demand, existing coverage and costs.

4 STATUTORY CONSIDERATIONS

- 4.1 A primary application will be required for the installation of the 5G network. Location and appearance of the small cells will need to take the environmental setting and World Heritage Status into consideration.
- 4.2 In addition to planning, consents will be sought from council teams responsible for street furniture, while wayleaves may be required if any equipment is to be attached to buildings

5 RESOURCE IMPLICATIONS (FINANCE, PROPERTY, PEOPLE)

- 5.1 £773k grant has been awarded to B&NES to deliver the ONE WORD 5G Mobile Network Pilot project over eighteen months. Costs are profiled into the 2023/24 and 2024/25 financial years and to be added to the capital programme for Digital B&NES as fully approved budget. Officer time from the Business & Skills, IT and Street Lighting teams will be charged to the project and will cover their time spent in helping to build out and set up the network. The Council will own the assets (small cells and fibre) to be purchased and installed to provide the 5G network.
- 5.2 B&NES Council's Procurement Team has been engaged on the project and will support the necessary capital purchases required to ensure best value and appropriate market engagement takes place.

- 5.3 During the project timeframe, ongoing maintenance costs are budgeted from the capital project grant allocation. Once the project ends, any future maintenance costs will be borne from the Council's revenue budget (Business & Skills Team) in the event that any such costs exceed any income generated from commercialising the network.

6 RISK MANAGEMENT

- 6.1 A risk assessment related to the issue and recommendations has been undertaken, in compliance with the Council's decision making risk management guidance.
- 6.2 A key project risk is associated with communications and perception. Business & Skills Team is aware of concerns among groups as to the safety of 5G and other mobile technologies. We refer to both UK Government (Gov.uk) and OFCOM research and guidance which provides clear evidence that the technology is safe, however we expect there to be a vocal opposition to this project.
- 6.3 By way of mitigation, ONE WORD offers an excellent opportunity for the council to promote the benefits and new applications of mobile technologies which can provide strong economic, connectivity, cultural and inclusion benefits to the local population.
- 6.4 Other key risks relate to finance. As the grant funding will be paid in arrears, the project team need to ensure all spend is eligible for claims. Likewise, tight project management is required to prevent the project remains within scope, timeframe and budget.
- 6.5 A final risk to state is on operations. The network itself will be owned by B&NES Council, hence there are risks involved with equipment failing and requiring repairs/maintenance. By way of mitigation, additional spare assets are to be purchased and budget has been set aside to cover this eventuality.

7 EQUALITIES

- 7.1 The nature of this pilot will bring many positives relating to the council's wider work around inequalities, sustainability, cost savings and a move towards innovation and supporting tourists and businesses. It is also in support of our new and emerging Economic Strategy, as well as the Future Ambitions Board which includes a "Digital Connectivity" strand. Digital Exclusion is a key driver of this project, ensuring that the benefits of new technologies are available to underserved communities.
- 7.2 Furthermore on equalities, we will encourage community involvement in the testing of the network from disadvantaged groups. At least 200 handsets will be

provided to users to test the new network, and council officers will be working with community groups to ensure these handsets reach a wide spectrum of our residents.

- 7.3 An equalities impact assessment will be completed upon commencement of the project.

8 CLIMATE CHANGE

- 8.1 Digital services and connectivity is a key aspect of our local adaptation to the climate emergency. Accessing work and services online can reduce carbon emissions associated with travel to work, whilst also reducing waste associated with physical goods and printing.

- 8.2 The mobile network itself runs on relatively low power, and part of the ONE WORD project will involve making technological improvements to ensure the network operates as efficiently as possible. The data centre itself will be based at Bath Guildhall.

9 OTHER OPTIONS CONSIDERED

- 9.1 None

10 CONSULTATION

- 10.1 The residents Voicebox survey conducted by the Council has provided evidence that a significant proportion of residents cite connectivity issues as a barrier to accessing services online. As a result, B&NES Council has proactively sought funding and opportunities to improve connectivity for residents in the district.
- 10.2 The ONE WORD 5G Mobile Network project has received a Grant Funding Agreement which allows recruitment of a project co-ordinator role to lead on engagement and communications on a day-to-day basis.
- 10.3 A planning application will be submitted for the installation of the new mobile network, with associated consultation for local residents.

Contact person	Rob Dawson and Claire Lynch, Business & Skills Team
Background papers	N/A
Please contact the report author if you need to access this report in an alternative format	

ⁱ Residents Voicebox Survey (2021, 2022)