



# **Newcastle Under Lyme Digital Connectivity Business Case**

## **Index**

<b>1.0 Purpose.....</b>	<b>3</b>
<b>2.0 Executive Summary .....</b>	<b>5</b>
<b>3.0 Business Case Strategic.....</b>	<b>9</b>
<b>4.0 Economic Case.....</b>	<b>20</b>
<b>5.0 Technical Solution.....</b>	<b>24</b>
<b>6.0 Commercial Case.....</b>	<b>25</b>
<b>7.0 Financial Case.....</b>	<b>27</b>
<b>8.0 Management Case.....</b>	<b>28</b>
<b>9.0 Recommendations.....</b>	<b>29</b>

# 1. Purpose

Newcastle Under Lyme were one of the 101 successful bidders for the Government's Town Deal fund, making a strong case which secured £23.6M of funding.

Projects have been identified for the Town Deal fund which will deliver a step change not just in the look and feel of the town centre but will also create long term skills and employment opportunities.

The development and delivery of the SMART Newcastle Digital Infrastructure initiative Improving the provision of high-speed broadband is one of the proposed interventions.

Following earlier studies and analysis a series of options were identified in 2022 comprising.

- continue 'business as usual';
- develop the SafeZone®, or similar, smartphone application;
- improve the resilience of the fibre network;
- invest in public sector ducting;
- enhance 5G coverage across Newcastle-under-Lyme; and
- 'flooding' the town centre with wi-fi.

Whilst each of these proposed options were considered to have merit and have been subsequently scrutinised, due to the ever changing market a further review was undertaken with a view to validating these options and if identified recommending an alternative digital infrastructure intervention.

This Business Case is therefore focused on addressing the following requirements of Newcastle Under Lyme Borough Council:

- Review of current proposed options
- Summary of the commercial market
- Options for investment
- A recommended way forward based on sustainability, value for money and long term benefit.

In addressing these requirements, a series of considered key principles and criteria were also applied:

## **Key Principles:**

- Is the available Town Fund funding for a digital connectivity intervention still required or has the commercial market addressed or has demonstrated an intention to invest in the Town Fund Area?
- Are there other ways in which we can enable improvements in digital connectivity not through funding interventions but through current projects and existing infrastructure?
- If an intervention is required what is the most cost effective and sustainable commercial and technical model based not on technology but on the outcomes, we are seeking to realise?
- Ensure that best value and long term sustainability is realised and not quick win fixes.
- Ensure that the investment drives direct benefit for the Council in the way it can deliver services and support residents and businesses.
- Ensure that the focused investment addresses and stimulates economic growth.

- Ensure that the focused investment realises benefits around enabling digital skills and inclusion.
- Create a platform for collaboration bringing together the Council, Public Services, University, Businesses and Communities.

## 2. Executive Summary

### 2.1 Coverage Narrative:

- Based on the market engagement exercise there is evidence to suggest that commercial investment primarily from Openreach and Virgin Media is due to be increased and sustained.
- There remains an absence of any significant Alnet Investment (Alternative Network Providers). Investment within the Borough currently stands at 0.44% which is in contrast to neighbouring local authorities where between 30-65% of dwellings have benefited from such investment. There is no clear explanation for this but it should be explored further to understand what Newcastle Under Lyme could do to raise this level of investment.
- Based on the most OMR (Open Market Review) Data co-ordinated by Digital Staffordshire and BDUK it is evident that commercial investment will address the vast majority of the designated Town Fund Area primarily residential but also business.
- Despite this planned investment reflected in the OMR Data it is apparent that areas of the town centre and business park clusters principally located along the A34 will not benefit from FTTP (fibre to the premises) investment and will remain fibre 'not spots' for the foreseeable future with a consequent impact upon the local economy and becoming a potential barrier to future growth and investment.

### 2.2 Existing Option Reviews:

As part of the evaluation review which has informed this Report, the options as outlined in the SMART Newcastle Digital Infrastructure Options Paper of March 2022 were subject to further analysis the result of which identified that the options as presented may have had a variable level of merit in early 2022 but for the reasons as described were no longer considered viable or would not deliver value for money:

- **Continue 'business as usual';**

Based on the OMR data any voucher scheme would have limited impact as this Report is of the considered opinion that commercial investment will address the issue of business connectivity through the proposed solution.

- **Develop the SafeZone®, or similar, smartphone application;**

Whilst the safezone application may have in principle a degree of merit making a funding intervention would not we believe be a good use of public money based on the following grounds:

- The business case is predicated by a return on investment through commercialisation which based on other similar application projects evidence suggests that this cannot be validated,
- There is a reliance on 5G as the primary means of connectivity which based on current

5G coverage is not available nor is there evidence that consumer take up of 5G at this stage which capture the key market that this application is focused on.

➤ **Improve the resilience of the fibre network;**

This is considered a somewhat confusing and ill thought out solution which appears to be based on a voucher scheme for the public sector. A model which appears not to be supported by any cost model nor it should be noted has it been implemented by any other local authority.

➤ **invest in public sector ducting;**

Whilst such an option may have had some merit five years ago, investing in a new ducting network in the current economic climate is considered unviable and would not fulfil a value for money matrix.

To deploy a ducting network of just 10Km at a cost per kilometre of circa £175K this would cost in the order of £1.75M which when added to ongoing maintenance and liability issues would be both costly and would not realise a return on investment.

Reference was made to realising a commercial opportunity by providing access to third parties to utilise the ducting in return for an annual rental fee, however the level of rental would be aligned to PIA Openreach rental fees which are circa 50p per linear metre which would be result in a minimal return and without the desired strategic impact.

On this basis this Report is of the considered view that more sustainable and viable options available.

➤ **Enhance 5G coverage across Newcastle-under-Lyme;**

Whilst aspirational enhancing 5G coverage within Newcastle Under Lyme should be left to the Mobile Operators investment. Making a funding intervention will not accelerate investment and could be subject to 'state aid' review, what would be of merit is for the Council to play an enabling role in providing access to its assets and infrastructure but this would not require any direct investment and should be the strategic approach adopted.

➤ **'Flooding' the town centre with wi-fi.**

Whilst such a technical solution may have had some merit 10 years ago, the delivery of Outdoor Wi-Fi remains an unproven commercial business case which is based on low take up and limited benefit realisation. For example, Boroughs in London where Public Wi-Fi was deployed is now being removed due to lack of use. .

In outlining the position in respect to Outdoor Wi-Fi this is not to suggest that Wi-Fi does not have an important role to play with the focus being on delivering inbuilding Wi-Fi and the leveraging of community hubs as digital hubs enabled by Wi-Fi which based on experience does offer considerable value.

## 2.3 Market Engagement – Key Findings

- Openreach extending investment within Newcastle Under Lyme
- Virgin Media planning some new fibre investment but not in the Town Fund Area.
- Virgin Media as part of their fibre upgrade investment will be upgrading their existing Cable Network deployed with the Borough to fibre between now and 2028.
- VX Fiber whilst present in Stoke on Trent have no plans to invest in the Town Fund Area unless public funding becomes available.
- ITS whilst no current presence within the Town Fund Area expressed interest in business park connectivity based on commercial investment.

## 2.4 Stakeholder Engagement – Key Findings

- Real appetite expressed by all parties to collaborate across all sectors and deliver a solution which would address economic growth but also realise opportunities to address digital inclusion.
- Real willingness expressed by Aspire Housing and Keele University to be involved in any connectivity project and consequent shared benefit.
- Grounds emerged to justify a focused intervention in addressing council connectivity requirements.
- Subject to the funding being available to extend the proposed solution to incorporate the Town Centre Public Realm CCTV Network migrating at key sites from a wireless to a fibre solution which would make the network more robust and resilient and provide a platform based on the cctv columns/locations to start thinking about the creation of a Smart Town Platform based on multiple user cases.
- Newcastle Under Lyme has the potential and opportunity to be an exemplar in Staffordshire in delivering a Digital Infrastructure Strategy and Action Plan.
- For Newcastle Under Lyme, it is essential that the principle of making any funded intervention meaningful for a resident or business must be adhered to.
- As the Draft Local Plan currently out for consultation is reviewed it is essential that Newcastle Under Lyme's digital aspirations are clearly captured.
- Requirement and aspirations of Keele University re their Keele In Town and the creation of the Town Hub Site need to be captured within any proposed intervention.
- Ensure that a holistic approach to digital is adopted and wherever possible projects and pilots requiring digital connectivity are considered collectively to strengthen the business case as well as reduce cost.

- There is a need for the Borough to develop a digital narrative which could support engagement with the market and attract investment.

## 2.5 Recommendations

- To note the changing telecom market regarding investment and the potential impact this will have on the Town Fund Area
- To progress with a detailed business to fund a dark fibre deployment linking public sector and community sites via Openreach PIA within the Town Fund Area which will deliver a fibre capability for the public sector and key partners such as Aspire Housing
- To note the indicative costs to deliver 50Km of dark fibre connecting public sector and community sites within the Town Fund Area amounting to £1.75M.
- **Business Case:** to progress with the proposed business case as detailed in Section 4, 5, 6 and 7I.
- **Actions and Timetable:**

To note and approve the following actions and timetable:

- Progress with preparation for a procurement exercise based on the Network Services 3 Crown Commercial Framework LOT 1:
  - Development of Procurement Specification technical requirements
  - Confirm site schedule to be included within the tender
  - Development of the commercial specification
  - Development of social value requirement
  - Development of evaluation questions

Procurement Documentation to be finalised and approved for release mid March 2024.

- Procurement Process to be progressed March-April 2024
- Contract Award May 2024
- Contract commencement May 24
- Delivery June 24 – June 25
- Completion June 2025



### 3 Business Case

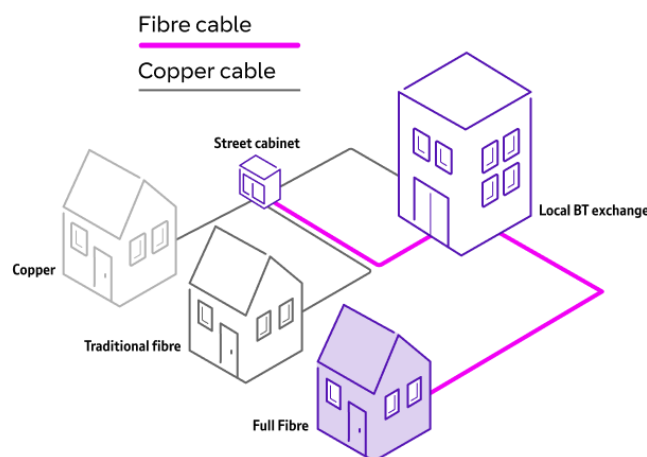
#### 3.1 Strategic Case

To direct the £2.0M allocated for digital infrastructure from the Town Deal Fund to make sure that communities and primarily businesses within the Fund Area have access to Gigabit-capable fibre broadband and realise the direct and indirect social and economic value that could be achieved.

##### 3.1.1 Current Market Fibre:

The bulk of internet connections today still use BT Openreach's old copper network to connect to the home, with fibre only being used to connect the telephone exchanges to the familiar green street cabinets, where the jump onto the copper network is made. This technology is known as 'Fibre to the Cabinet' (or 'traditional fibre' in Schedule 1 below) and even though it still uses the copper network for part of its journey, BT brands this rather confusingly as a 'fibre broadband' service. This is confusing because a true fibre broadband service – or 'full fibre' – uses a fibre optic connection all the way from the telephone exchange to the home; 'Fibre to the Home' or 'fibre to the Premise'. Full fibre can support speeds of 1 Gbit/s and above or ten times faster than the speeds BT's 'fibre -copper' broadband can offer (although this too is more than capable of meeting all the current streaming needs of even the most demanding households).

Schedule 2 describes the different types of broadband available in the UK market and the performance differences between the technologies.



*Schedule 1: BT illustration of different types of broadband connection; the bulk of the UKs broadband connections today are via what BT calls 'Traditional Fibre' which only uses fibre from the exchange to the street cabinet, using the old copper telephone network to connect from there to customer homes. Broadband performance over copper declines quickly the further the user is away from the street cabinet*

But there are other home broadband technologies that can deliver speeds of 1Gbit/s and above that do not use fibre optics; Virgin-Media's cable TV network covers over 60% of the

UK population and is Gigabit-ready. This is why the Government shifted from a ‘full fibre’ ambition to one of Gigabit ready, rightly placing emphasis on performance rather than the underlying technology.

BROADBAND TYPE	TYPICAL PERFORMANCE	DESCRIPTION
Full Fibre broadband	1 Gbit/s	Known variously as:- Full Fibre Fibre to the Premise (FTTP) Fibre to the Home (FTTH)
Ultrafast broadband	100Mbit/s – 360Mbit/s	Typically cable delivered services from Virgin-Media who also offer higher speed ‘full fibre’ services
Superfast broadband	Whilst Ofcom have a single Superfast Broadband category, for the purpose of this report we also use the following sub-divisions to provide more granular insight: ‘Good’ Superfast 30Mbit/s - 100Mbit/s ‘Basic’ Superfast 10 Mbit/s – 30 Mbit/s	Fibre to the Cabinet (FTTC) as provided by Openreach and their reseller Service Providers
Decent broadband	c10 Mbit/s	usually older ‘DSL’ services)

*Schedule 1: Broadband market taxonomy*

Increasingly the market is witnessing a dramatic shift towards full fibre investment and deployment and it is imperative that Newcastle Under Lyme Borough Council working with its partners continue to attract and benefit from such investment.

### **3.1.2 Current Fibre Coverage Newcastle Under Lyme:**

Before analysing in further detail, the current level of full fibre coverage within the Borough of Newcastle Under Lyme it is imperative that we can place this coverage within a regional and national context which will enable us to assess our position and determine whether the current levels of coverage and investment in FTTP is placing Newcastle Under Lyme at a disadvantage economically and strategically both at a regional and national level.

In this respect the following table Schedule 3 seeks to compare Newcastle Under Lyme within Staffordshire and Cheshire

	November 2023 Fixed Residential Connectivity Data Think Broadband				
Area	FOTP/FTTH	Openreach	Alnets (Alternative Network Providers)	Gigabit	Below Legal USO
England	55.73	34.37	28.30	78.75	0.66
Staffordshire	52.19	35.69	19.39	73.81	1.17
Newcastle Under Lyme	46.51	42.83	0.55	76.24	0.62
City Stoke on Trent	36.06	9.33	27.69	90.28	0.12
Cheshire East	58.67	44.98	23.62	75.47	1.50
Cannock Chase	75.71	56.70	67.76	94.15	0.11
South Staffs	52.66	12.25	30.47	53.07	1.51
Stafford	50.35	48.46	4.96	73.89	1.52
Staffs Moorlands	39.42	16.92	27.72	63.21	3.42

Source: [Think Broadband Nov 2023](#)

### 3.1.3 Market Engagement:

To provide the Newcastle Under Lyme Town Fund Board with a thorough insight into the fibre telecom market of Autumn 2023 and to inform this Business Case a series of individual virtual sessions were hosted by Regional Network Solutions on behalf of Newcastle Under Lyme Borough Council sponsored by the Town Fund Board during October and early November 2023. The following companies which represented a cross section of the market in respect to potential interest and business model responded to the invitation to participate in this exercise:

- Openreach
- Virgin Media
- NexFibre
- VX Fiber
- ITS Technology
- City Fibre
- Netomnia
- NEOS

- Zayo
- CommsWorld
- Full Fibre

In the case of Full Fibre, City Fibre and Netomnia they declined to participate on the basis that they had no commercial interest in Newcastle Under Lyme and had no current investment plans.

All the other companies as detailed responded and provided a focused and considered response to addressing the following information gathering questions:

- Understand the current levels of full fibre coverage within the Borough of Newcastle Under Lyme
- Understand your current and future plans for full fibre investment within the Borough of Newcastle Under Lyme
- Understand what would attract your company to invest in further full fibre deployment.
- Understand how such fibre connectivity could be an enabler for future public sector reform.
- Understand what challenges and issues (if any) which could deter your company from investing in the Borough of Newcastle Under Lyme
- Understand what role Newcastle Under Lyme Borough Council should we play as an enabler with potential funding.
- Understand how we can ensure that digital inclusiveness is promoted and enabled.

#### **3.1.4 Strategic Findings:**

- A summary of the market engagement findings is detailed in Appendix A
- Through Open Market Review data shared by Staffordshire Digital it is evident that the Town Fund Area will benefit over the next 2-3 years from further commercial fibre investment however it was noted that the majority of business parks were still excluded from this proposed investment and therefore could be a driver in any proposed intervention.
- There was a clear sense that the telecom market welcomed both the market engagement exercise being undertaken and the opportunity to develop this dialogue going forward.
- The telecom market if properly engaged and managed will positively respond to the opportunities available within the Borough and are keen to pro-actively engage in the future with both the Council and Developers.

- Whilst it is acknowledged that Openreach will play a key enabling role in delivering digital infrastructure within new Developments, other Carriers such as Virgin Media, ITS all expressed a keen interest to invest in such development opportunities and this interest needs to be captured as part of the evolving Digital Masterplan. Enabling choice for residents and businesses will be of fundamental importance.
- With the key historic presence in the Borough of Virgin Media with over 64% of dwellings within the Borough have access to an existing Virgin Media Cable Service combined with Openreach's FTTP investment Newcastle Under Lyme as Borough have almost achieved (currently 76% Gigabit enabled), the Government's aspiration of enabling 85% of dwellings having access to Gigabit Broadband by 2025.
- There is an absence of any significant Alnet (Alternative Network Provider) investment which is both surprising and disappointing when one compares this with the level of Alnet investment in some neighbouring Boroughs and Districts. This is a matter outside this Report which be explored in more detail with a view to understanding the reasons or reason why?
- Arguably, Newcastle Under Lyme Council could choose to rely on market momentum, creating a positive supportive environment for operators interested in serving the town. But given the growing economic headwinds facing all fibre operators, there is a real risk that investment in fibre rollout will slow with the economy, impacting marginal locations like Newcastle Under Lyme.
- This initial market engagement suggests there is operator interest in Newcastle Under Lyme and the Town Deal Funding could turn this interest into action.
- It is proposed that a circa 50km fibre spine connecting public sector buildings and community facilities within the Town Fund Area would potentially cover 1,000 businesses located within the Town Fund Area and provide the basis for FTTP connectivity to business parks which are currently not planned to benefit from FTTP investment. Without such a focused intervention these business parks will be placed at a distinct disadvantage in terms of attracting digital high value businesses in the future.
- Areas of the Town Fund have levels of deprivation and this funding if approved would seek to ensure that the fibre deployed would enable local community facilities and social housing clusters and deliver free Wi-Fi enable internet services into such facilities to enable and support digital inclusion and skills initiatives. In doing so create local community Digital Hubs.
- Through the planned soft market test and procurement process, we will prioritise bidders who offer a wholesale model and can bring additional investment from their retail channel partners.
- Based on the initial market engagement we believe that securing a carefully chosen partner with an effective wholesale ecosystem could bring a further c£1.5-2M of private sector investment, providing the capillary gigabit connections to business.

We have to take advantage of digital and internet technology so businesses can work efficiently and everyone is connected and can have simpler, easier lifestyles, communicating when and with whom they want.

### 3.1.5 Strategic Alignment

The proposed business case for funding is multifaceted in terms of partners, areas of coverage and scope but what underlies each of the key drivers in this strategic case is a clear aspiration to improve access to affordable Gigabit fibre connectivity for public sector services, community groups, businesses and communities throughout the Newcastle Under Lyme Town Fund Area.

- **Newcastle Under Lyme Town Centre Vision:** Contribute to stimulating investment and demonstrate through partnership how our digital aspirations can be realised.
- **Enable Strategic Objectives:** Enable and support a Digital Vision of improving access to connectivity for all.
- **Education & Training:** Address the evident deficiency in digital skills within the Borough (Town Fund Area) through training and education and in doing so create a local workforce which can support future business needs and be ready for future employment opportunities.
- **Supporting and Creating Employment Opportunities:** Working with enterprise ensuring that improvements in connectivity are accessible to business and that there is a focus on supporting current businesses as well as creating the connectivity climate to attract digital related sectors to Newcastle Under Lyme.
- **Revitalise the Town Centre:** Create a digital platform that can improve connectivity for businesses and deliver access to a fibre network which can drive digital innovation and in doing so make the Town Centre a more attractive destination for retail and leisure. Subject to further due diligence incorporating the public realm cctv network as part of this fibre network could contribute to creating this platform.
- **Attract Private Sector Investment:** Through this investment continue to promote attract and accelerate direct investment from the private sector into Newcastle Under Lyme.
- **Address Digital Inclusion:** Through this investment and by leveraging social value we will ensure that addressing digital inclusion is a priority by creating local digital hubs within communities which will be safe and secure areas to access the internet with support being made available to assist those residents requiring additional support and training to get on line.
- **Enable Public Sector Services:** Contribute to innovative ways of delivering public sector services within Newcastle Under Lyme in a more cost effective way potentially reducing connectivity cost by circa 70%.

- **Enable Community Facilities:** By enabling community facilities such as community halls with fibre connectivity and access to free Wi-Fi connectivity within these Centres this will develop their role within communities by becoming local digital community hubs which can support the delivery of local public services (Council/NHS), support community focused digital inclusion initiatives, become a hub for local micro businesses, and become more attractive to other users within the community (support community groups)..
- **Smart Town Ecosystem:** Contribute to the creation of an accessible fibre platform which could potentially support a future 5G ecosystem (use of public sector assets buildings and street furniture) and enable Newcastle Under Lyme working with its partners such as Staffordshire CC, Keele University to promote and proactively implement a sustainable Smart Place Strategy for the Town which will attract investment, stimulate research and innovation.

### 3.1.6 Strategic Partnerships

#### Public Sector Agencies:

This Business Case will ensure that we align with and collaborate in partnership with other public sector partners:

- Council
- Staffordshire CC
- Digital Staffordshire
- Aspire Housing
- Keele University

#### Direct Strategic Public Sector Benefits:

Potential Savings:

- Will enable an alternative service delivery model enabling migration to cloud based services based on internet service provision.
- With the availability of fibre connectivity and the associated business model based on a 15 year IRU for access to the fibre (free for the public sector to use) this will enable Newcastle Under Lyme Borough Council to drive significant savings through any future connectivity provision procurement –

#### Indirect Public Sector Strategic Benefits:

- Enable the public, private and voluntary sectors to progress in partnership a wider social value strategy in respect to realising wider community benefit and addressing digital exclusion through the creation of local digital community hubs.

### 3.1.7 National & Regional Strategic Alignment

- Alignment with national and local government strategic ambition - The government wants to ensure that gigabit connectivity is available in the most commercially viable 85% of the country by 2025. This proposed business case will be supportive of this objective and will deliver a healthy competitive gigabit fibre connectivity ecosystem within the Town Fund Area of Newcastle Under Lyme, an ecosystem which is much needed.

### 3.1.8 Key Strategic Outcomes

This proposed business case will be focused on delivering a series of fundamental strategic outcomes which we believe are achievable and can be realistically quantified both now and in the future as part of ensuring a return on this investment. The business case as described will realise:

- **Business Retention and Growth:** will ensure access to fibre for all businesses and not just for businesses which can afford fibre lease line products. Will support in particular SME's and micro businesses which increasingly rely upon digital connectivity and will assist their retention and growth within the Borough.
- **Economic Benefit for the Town Centre and Wider Town Economy:** create a platform of fibre connectivity across Newcastle Under Lyme which will enable us to promote Newcastle Under Lyme Town Centre as place for business and will help us attract long term investment.
- **Stimulate Fibre Investment:** Stimulate and attract further investment in fibre infrastructure within Newcastle Under Lyme. Accelerate interest of the market to invest and deploy.
- **Smart Borough 5G Ecosystem:** create an accessible fibre platform principally in the Town Fund Area which would support a future 5G ecosystem and enable Staffordshire CC and Newcastle Under Lyme Borough Council to work with partners to promote and proactively implement a Smart Place Strategy for the Town.
- **Enablement of Strategic Objectives:** Realise wider Digital Vision of improving access to connectivity for all.
- **Social & Community Benefit:** improve access to Gigabit fibre connectivity within the Town providing opportunities for community hub working and studying for those who struggle with access to connectivity at home, attract and retain more local businesses with consequent improvements in employment opportunities and uplift in skills, leverage and improve access to digital services.



- **Tackling Skills and Training:** improve access to digital services within the Town which would stimulate business which in turn will generate sustainable job opportunities that could be accessed by local people and in turn generate genuine opportunities to raise aspirations and positively influence skills development.
- **Housing:** be an enabler in ensuring that all housing in the Town Fund Area will have the potential capability to access Gigabit broadband services and contribute to the default requirement of fibre being available in all new housing development regardless of tenures.
- **Public Sector Services:** enable innovative ways of delivering public sector services including the creation of a platform to deliver a One Public Sector Network within Newcastle Under Lyme.
- **Digital Inclusion:** create a platform which can drive digital inclusion initiatives and attract investment from fibre carriers and internet providers who are looking to promote and implement a social tariff model.

### 3.1.9 Stakeholder Engagement

To inform this Business Case an engagement process was undertaken which involved over 20 individual meetings with both stakeholders within the Council as well as with key stakeholders in external organisations including Aspire Housing, Staffordshire CC, Keele University and Newcastle Under Lyme BID.

In each case the sessions were focused on an information gathering exercise with a view to understanding current awareness, challenges and projects relating to digital related projects at both a Departmental and Directorate level.

The participation and contribution of all stakeholders was invaluable in contributing to this Business Case and the recommendations duly made:

#### - **Council Engagement**

Engagement undertaken with:

- Planning
- Digital Services
- Parking
- Environmental Health
- Economic Development
- Regeneration
- Public Realm CCTV
- Estates

#### - **External Stakeholders**

Engagement undertaken with:

- University of Keele

- Staffordshire CC
- Newcastle Town Centre BID
- Aspire Housing
- Stoke on Trent City Council Public Realm CCTV

### **Stakeholder Strategic Findings :**

- Previously proposed Town Fund Public Wi-Fi deployment no longer deemed viable and considered not to realise value for money on grounds of potential demand, use and capability
- Real appetite expressed by all parties to collaborate across all sectors and deliver a solution which would address economic growth but also realise opportunities to address digital inclusion.
- Real willingness expressed by Aspire Housing and Keele University to be involved in any connectivity project and consequent shared benefit.
- Subject to the funding being available to extend the proposed solution to incorporate the Town Centre Public Realm CCTV Network migrating at key sites from a wireless to a fibre solution which would make the network more robust and resilient and provide a platform based on the cctv columns/locations to start thinking about the creation of a Smart Town Platform based on multiple user cases.
- Newcastle Under Lyme has the potential and opportunity to be an exemplar in Staffordshire in delivering a Digital Infrastructure Strategy and Action Plan, however, to ensure that this opportunity is realised it is essential that the Council focuses on outcomes and not is thrown off course by new technology for the sake of new technology.
- Too often projects stall or lose direction when a technology based concept becomes the driver, for Newcastle Under Lyme it is essential that the principle of making it meaningful for a resident or business must be adhered to.
- As the Draft Local Plan currently out for consultation is reviewed it is essential that Newcastle Under Lyme's digital aspirations are clearly captured. The involvement of Planning in this process was welcomed and noted with additional wording being considered to strengthen the context and requirement narrative.
- Requirement and aspirations of Keele University re their Keele In Town and the creation of the Town Hub Site need to be captured within any proposed intervention.
- Ensure that a holistic approach to digital is adopted and wherever possible projects and pilots requiring digital connectivity are considered collectively to strengthen the business case as well as reduce cost. For example, in respect to the grant funded air quality monitoring initiative rather than a new wireless/mobile solution being procured is there a way that the council's current connectivity infrastructure or the proposed fibre solution detailed in this Report could be an enabler.

➤ Despite the considerable and commendable work in drafting the new Local Plan there is still an apparent absence of a Borough digital narrative which in a constructive way would be promoted with a focus on:

1. Economic Growth: in promoting the Borough to new business. More could be done to promote Newcastle Under Lyme as a digital destination which supports businesses large and small. Should the Council be doing more? Are we doing enough to promote the Borough?
2. Attract Investment – Profile as a Digital Destination
3. Digital Skills and Training
4. Addressing Digital Inclusion

## 4.0 Economic Case

### 4.1 Option Evaluation

To ensure that the proposed business case reflected and would contribute to the Town Fund Vision a number of commercial and technical models were explored and evaluated. These included the options of Outdoor Public Wi-Fi, Anchor Tenancy, deployment of new ducting through to deploying fibre via Openreach PIA and facilitating a fibre upgrade.

Following a detailed due diligence exercise as detailed in the accompanying Business Case Report it is recommended that a delivery of a dark fibre spine running through the Town Fund Area and utilizing existing PIA Openreach ducting and delivering fibre connectivity to nominated public sector buildings and community facilities would deliver a value for money technical solution as well as stimulate investment and in so doing indirectly enable businesses and communities both located in proximity to the enabled Distribution Points as well as properties passed. This approach we believe will drive and enable innovation, community benefit and realise our key outcomes and objectives.

Based on the findings and whilst further work will be required to develop this strategic proposal it is recommended that the following focused option should be progressed:

With a strategic focus to address economic growth, digital inclusion and public service delivery public sector and community sites should be enabled through the funding with a dark fibre connection delivered through Openreach's PIA infrastructure ducting infrastructure whereby the Council would benefit from access to the fibre free of charge for 15 years and deliver a fibre network across the Town Fund Area which would realise multiple opportunities and benefits.

Based on current market insight it is anticipated that based on the funding available and a cost model of £35K per kilometre to deliver this network around 50Km of fibre could be deployed to a variety of sites including council buildings, council owned community centres, Keele Universities University.

### 4.2 Financial:

- Business Case Value based on a desktop analysis = £1.75M

(Pricing includes a contingency and project management per site but is not based on a manual survey.

Further efficiencies would be anticipated when incorporated into a wider package of upgrades as opposed to individual upgrades)

- To deliver circa 50KM of dark fibre within existing PIA infrastructure with strategically located break out points and circa 30 sites could be delivered for £1.75M. This is based on LFFN benchmarking at £35,000 per km.

### 4.3 Benefit Realisation:

#### 4.3.1 Public Sector Benefit Realisation

##### Immediate Benefits:

- The availability of fibre connectivity will enable Newcastle Under Lyme Council to drive significant savings.

##### Strategic Benefits:

- **Creation of a One Public Sector Network:** Make a significant contribution to creating a fibre platform which will offer the capability to realise a vision of a One Public Sector Network delivering an aggregated connectivity and service platform with long term savings within Newcastle Under Lyme.
- **Town Centre Digital Enablement:** by delivering fibre within the Town Centre (cctv enablement) which the Council and its partners have access to will provide the opportunity to realise a wider Smart Town Vision involving the deployment of sensors to capture data and look at innovative ways driven by digital connectivity to develop a new proposition for the Town Centre as a destination..
- **Enabler for the wider Town Fund Vision:** Investment in fibre will contribute to realising other key objectives of the Town Fund

#### 4.3.2 Environmental Realisation

Whilst not completely dependent upon a fibre connection the availability of fibre as a backhaul alternative would enable the Council and its partners to accelerate their approach to monitoring environmental problems. Initiatives already delivered within individual authorities include:

- Deployment of IOT sensors to measure carbon omissions (traffic)
- Deployment of remote telemetry to measure moisture and damp.

#### 4.3.3 Community Realisation

- The aim of this business case and delivery is to identify existing community assets and build upon these within the Town Fund Area.
- Desired outcome to deliver a strong community presence which maximises early intervention.
- Digital Community Hub projects to be progressed enabled by fibre to the premise connectivity; providing public space where residents across all localities can access information & advice on a wide range of social issues. The hubs provide support with social

issues including housing/ financial/benefit advice, special educational needs, digital workshops (IT support, training/CV writing), English language support.

- Development of these hubs to support Adult Services Social Workers, Dementia Navigators, Mental Health Employment Navigators, Advocacy Services and Care Co-ordination (NHS) workers alongside a voluntary sector offer.

#### 4.3.4 Economic Benefit Realisation

- By enabling additional Open Access Distribution Points (chambers) aligned to business parks and developments this will promote and stimulate further investment from the private sector to take fibre into poorly served areas with a consequent tangible impact in lifting local GVA and supporting local business investment and growth.
- With access to improved digital connectivity this will contribute to retaining existing businesses and attracting new business sectors to the Town will result in an increase in Business Rates and a return on Business Rate retention.
- Attract to Newcastle Under Lyme new growth sectors (advanced manufacturing, environmental technologies and energy, digital and creative services, life sciences and healthcare) which will generate higher skilled job opportunities for local residents and consequently higher wages.
- Be a catalyst for micro businesses and SME's who are currently poorly served by affordable business broadband services by providing them with access to fibre connectivity at a competitive price..

#### 4.3.5 Social Benefit Realisation

- **Community Digital Hubs:** Creating Digital Hubs by addressing within the business case the delivery of fibre infrastructure to Community Centre's. We believe that this will realise a wider outcome in respect to supporting digital inclusion initiatives, establish each individual centre as a centre for digital training.

Based on our engagement with key stakeholders and as described in our Public Sector and Community benefit realisation, we believe that this strategic initiative would generate significant opportunities and benefits not only for residents but providing a platform to support the delivery of health and social care services to residents in a digitally advanced way.

- **Support Training/Education:** Improve access to fibre connectivity (creation of local digital hubs) which will not only support the actual place of learning within each community but also address support for digital training within communities which could be co-ordinated by local businesses and the University of Keele..

- **Social Housing:** In areas of Newcastle Under Lyme where social housing managed by Aspire Housing has not attracted investment in improved internet connectivity, enabling a local public sector site with fibre connectivity could be the catalyst to attract private sector investment and consequently benefit residents.

#### **4.3.6 Future Telecom Benefit**

Through the creation of a fibre platform linking public sector sites the proposed business case will look towards building upon both current initiatives as well as enabling future opportunities:

- Significantly contribute to driving 5G deployment within the Town Fund Area in the next five years.
- Address current demand for new mobile sites to address current coverage and capacity issues (4G and future 5G) within Newcastle Under Lyme and the surrounding area by identifying public sector assets which could be potentially used principally for Small Cell deployment.

## 5.0 Technical Case:

With a strategic focus to address economic growth, digital inclusion and public service delivery public sector and community sites should be identified and enabled through the delivery of dark fibre infrastructure funded by the Town Fund. This will focus on the following technical solution:

- Deployment of dark fibre infrastructure to public sector and community facilities located within the Town Fund Area. An additional option which could be explored within the proposed budget is the enablement of Public Realm CCTV within the Town Centre replacing the existing wireless network which is in need of upgrading.
- Dark Fibre Infrastructure to be delivered through Openreach's PIA infrastructure ducting infrastructure.
- Each site enabled with a Dark Fibre Network would subsequently take a lit service namely an internet service.
- As part of the fibre routing create a series of strategically located breakout chambers outside poorly served business parks

As part of the due diligence process and in developing the proposed solution the following public sector sites and community facilities as detailed in Appendix B were considered and a strategic criteria applied which focused how the connections between sites are delivered (routes) would enable and address the following strategic aspirations and outcomes:

- Address with a robust and sustainable solution based on a scalable technical and commercial model fibre connectivity which will contribute to the Council's Digital Strategy.
- Identify areas of digital and social exclusion through the enablement of community facilities with fibre connectivity and an inbuilding Wi-Fi capability
- Identify business parks currently poorly served with fibre internet connectivity (focus on start up's, micro and medium sized business who are unable to benefit from a lease line option.

Based on these sites (not exhaustive but indicative) a mapping process was undertaken the outcome to which are detailed in Appendix C which illustrate a proposed technical design and how sites would be connected.

Based on this initial mapping exercise and current market insight it is therefore currently projected that 50Km of dark fibre would need to be deployed to connect the sites currently detailed in Appendix C which would equate based on the funding available and a cost model of 35K per kilometre to deliver this network and connect the nominated sites including council buildings and council owned community centres.

An example of a technical specification can be referenced at Appendix D



## 6.0 Business Case

### 6.1 Business Case Value based on a desktop analysis = £1.75M

(Pricing includes a contingency and project management per site but is not based on a manual survey.

Further efficiencies would be anticipated when incorporated into a wider package of upgrades as opposed to individual upgrades)

Based on 50KM of dark fibre being deployed and circa 30 sites being connected as illustrated in the mapping above the following costings would apply:

Cost per Km (Dark Fibre) = £35,000

30 Sites Enabled

**Overall Cost 50Km x £35,000 = £1,750,000 (includes contingency)**

#### **Overall Cost**

Costs inclusive of contingency, project management

**Total Cost £1,750,000**

- All costs referred to in this Business Case are indicative, the actual cost of the project will not be forthcoming until formal engagement is concluded and actual surveys are undertaken.
- We believe that through a benchmarking process there is potential of securing a saving on the budget available. , which could be re-invested in alternative digital related initiatives including the option of addressing digital inclusion within the proposed Community Digital Hubs..

### 6.2 Commercial Model:

- Newcastle Under Lyme Borough Council would benefit from access to the fibre free of charge for 15 years (based on an IRU).
- Newcastle Under Lyme Borough Council would only pay for the internet service layer which based on current benchmarking would be between £450 100Mb to £800 Gigabit Service per annum.
- The fibre deployed would constitute an open access network whereby the delivery partner would have commercial rights to leverage the fibre and charge other internet providers and fibre carriers to utilise the fibre for transit in return for a transit rental fee.

- By providing access to other providers and reducing their costs to access business parks on an open access basis will stimulate and accelerate investment into poorly served areas and generate competition.
- Newcastle Under Lyme Borough Council could realise a revenue share from the transit fees charged with the revenue secured being reinvested in inclusion projects.

### **6.3 Procurement**

- A procurement route has been identified which will deliver the most effective means of engaging with the market and procuring the fibre infrastructure as described.
- In this instance an option appraisal exercise was undertaken Appendix E which identified in conclusion that Crown Commercial Frameworks Network Services 3 RM6116 LOT's 1 &/or 2 would offer the most cost-effective and accelerated procurement process.
- For the purposes of the business case the issues of Subsidy Control and State Aid and associated risks were assessed. Based on the following grounds it is the considered view that this business case complies with both Subsidy Control and State Aid as currently defined:
  1. Fibre upgrade to a public sector site
  2. A public service is delivered at each of the nominated sites which are deemed to constitute a public building/facility
  3. The proposed fibre upgrade will not be subsidising a commercial business

## 7.0 Financial Case

### **Business Case Value:**

- £1.75M (based on a desktop analysis undertaken by Regional Network Solutions)
- (Pricing includes a contingency and project management per site but is not based on a manual survey.
- Further efficiencies would be anticipated when incorporated into a wider package of upgrades as opposed to individual upgrades)
- All costs referred to in this business case are indicative, the actual cost of the project will not be forthcoming until formal engagement is concluded and actual surveys are undertaken.

### ➤ **Cash Flow:**

Subject to business case approval and subsequent procurement and award by May 2024 it is projected that completion of this project would be by June 2025..

## 8.0 Management Case

### 8.1 Project Management & Governance

#### Delivery:

Subject to business case approval and the proposed delivery and procurement model being progressed, project commencement should be May 2024 with completion by June 2025..

#### Lead Partner:

Newcastle Under Lyme Council through the auspices of the Newcastle Under Lyme Town Fund Board

#### Project Management and Governance:

- **Project Manager:** named Newcastle Under Lyme Borough Council representative.
- **Governance:** Named Governance Digital Staffordshire (recommended) who be part of the Project Management Board and will provide guidance and overview in respect to project governance.
- **Project Management Board:** Project Management Board will be created to oversee the Project will include all partners of the Newcastle Under Lyme Town Fund Project Team. The Project Management Board will report directly to the nominated Newcastle Under Lyme Council lead.
- **Project Delivery:** we will adopt project delivery templates successfully developed and implemented by South Essex Councils formerly ASELA (Association South Essex Local Authorities). An initial Project Risk Assessment is detailed in Appendix F
- **Governance Delivery:** we will adopt governance terms, templates, processes and risk management strategy successfully developed and adopted by Digital Staffordshire.

### 5.2 Partnerships

This business case is built upon collaboration and partnership and reflects a cross section of public and private sector partners within the Newcastle Under Lyme Town Fund Area including Keele University, Newcastle Under Lyme Business Improvement District, Aspire Housing, Newcastle Under Lyme Borough Council and Staffordshire CC.

## **9.0 Recommendation:**

### **9.1 Findings:**

To note the findings of this Report detailed in Sections 2 and 3.

### **6.2 Business Case:**

To progress with the proposed business case as detailed in Section 4, 5, 6 and 7I.

### **6.3 Actions and Timetable:**

To note and approve the following actions and timetable:

- Progress with preparation for a procurement exercise based on the Network Services 3 Crown Commercial Framework LOT 1:
  - Development of Procurement Specification technical requirements
  - Confirm site schedule to be included within the tender
  - Development of the commercial specification
  - Development of social value requirement
  - Development of evaluation questions

Procurement Documentation to be finalised and approved for release mid March 2024.

- Procurement Process to be progressed March-April 2024
- Contract Award May 2024
- Contract commencement May 24
- Delivery June 24 – June 25
- Completion June 2025