

Report To: **STRATEGIC PLANNING AND CAPITAL MONITORING PANEL**

Date: 3 September 2018

Reporting Officer: Tim Rainey, Assistant Director, Digital Services.

Subject **LOCAL FULL FIBRE NETWORK FUNDING**

Report Summary: This report details work being undertaken in Tameside to install a public sector dark fibre network to improve connectivity between key partners and reduce operating costs across the sector.

It also details £4.5m of funding received from the Department of Digital, Culture, Media and Sports (DCMS) as part of their Local Full Fibre Programme (LFFN) to help accelerate the work in Tameside and make it more commercially attractive to Internet Service providers.

Recommendations: That Members:

- 1) note the progress made on the fibre infrastructure scheme approved by Cabinet in December 2017.
- 2) note and support the objectives and deliverables wave 1 and wave 2 DCMS LFFN projects and agree that monies are included within Council's Capital programme.
- 3) RECOMMEND to Cabinet the development of a wave 3 bid to DCMS LFFN, which will seek to join together similar open fibre infrastructures across the North of England.

Financial Implications: Table 1 in section 1 of this report summarises the various sources of funding to enable significant financial investment in digital infrastructure across Tameside. This funding includes contributions from other public sector partners, Council investment and significant grant funding from the Department for Digital, Culture, Media and Sport (DCMS). The DCMS funding is subject to a detailed grant agreement, with specified terms and conditions, meaning that the grant must be utilised for the specified purpose to avoid any risk of clawback.

(Authorised By the Section 151 Officer)

The investment is creating a significant digital 'asset' which should generate significant tangible and intangible benefits for Tameside over a number of years. The works involve a number of public sector partners, both to facilitate the works, and to make financial contributions to some elements of investment. Officers must ensure that responsibility for the risks, rights and rewards of this new asset are clearly documented and agreed between the various partners.

In August 2017 a DCMS bid for £2,262k was successful to become one of the six national wave 1 Local Full Fibre Network (LFFN) pilot projects. A Grant Funding Agreement was signed with DCMS in February 2018 and the table in Appendix 4 shows progress towards completing both Tameside Capital elements and DCMS funded elements. A breakdown for the utilisation of the full amount can be

reviewed in section 3 and Appendix 3. This grant funding is now included on the Council's Capital Programme.

The Executive Cabinet approved a further £2,565k capital investment in December 2017 of which £1,725k will be used in networking equipment, ducting and fibre optic cable. The remaining £840k has been allocated for a new Data centre to be built as part of Ashton Old Baths Phase 3.

An additional bid made for £2,120k was successful and approved on 12 March 2018 by DCMS as part of a wider GMCA funding for Wave 2 LFFN funding. DCMS introduced an additional wave of funding for £23,800k to increase fibre to premises from 2% to 25% by 2020. This includes 10 local authorities, Police, Transport for Greater Manchester and Greater Manchester Health & Social Care Partnership. Further details can be viewed in section 4 and Appendix 3 of this report. This funding will be added to the Capital Programme once a signed funding agreement is in place.

**Legal Implications:
(Authorised By Borough
Solicitor)**

The Council can assist in the facilitation of this project under its general power of competence under s 1 of the Localism Act 2011, but must be mindful that this is kept under review through the Co-operative and its own governance, in particular in relation to compliance with state aid provisions and competition rules as the project progresses.

The support of the Department of Digital, Culture, Media and Sports is very important to the progression of this ground breaking work, which is highly commendable and intended to benefit the development of both the local economy and the community in their business and personal lives, and encourage investment and opportunity in the Borough.

Access to Information:

The background papers relating to this report can be inspected by contacting Tim Rainey, Assistant Executive Director, Digital Services by:



Telephone: 0161 342 3299

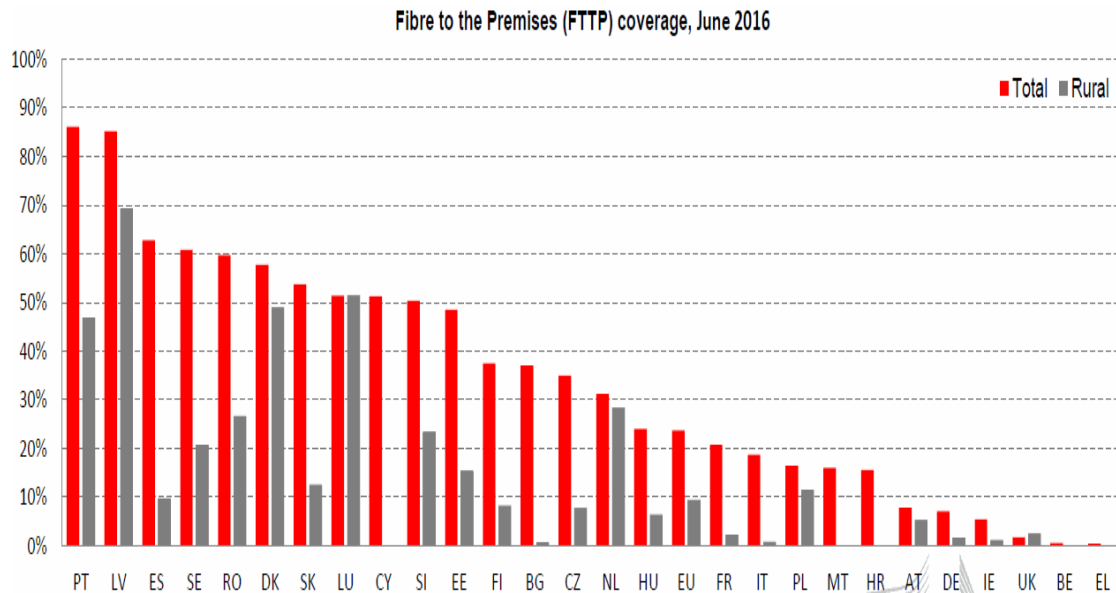


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1 BACKGROUND

1.1 The UK as a whole, let alone Tameside, is not well served with fibre infrastructure. Just 3% of residential and business properties in the UK are currently within economical connection distance from fibre infrastructure. Upgrades to current internet access services from the main suppliers, while welcome, offer only incremental change and create few opportunities for local business to innovate and add value.

1.2 The table below details fibre coverage across all EU states and the UK has the third lowest.



1.3 In January 2017 the Department for Digital, Culture, Media and Sport (DCMS) issued a “call for information” across all sectors to seek views on how the UK could make a step change in the delivery of full fibre networks and to help them develop a programme of activity to help stimulate the market using £500m of capital money announced in the Autumn 2016 budget.

1.4 The Council’s response detailed the work we have been doing in recent years to put in place our own fibre network, co-funded by other public sector partners, and each investment based on its own need and business case. Until recently this network of ducting and fibre had grown to around 15km – predominantly in and around Ashton - by opportunistically installing ducting and fibre when the need for a new connection arose (such as staff moving into Margaret Street in Ashton) and speculatively by a “dig once”¹ policy that meant installing ducting wherever major road or junction works were being undertaken, such as the Ashton Northern bypass or Denton Relief Road. This investment of £1,341k was funded by the Council (£453k) and contributions from public sector partners (£888k) (see further detail in **Appendix 3**, ref 9).

1.5 In 2017, with the contract for the Council’s Wide and Local Area Networks coming to an end the following year, we had the opportunity to plan the expansion of our digital infrastructure in a more strategic way. Rather than simply replace the existing arrangements with a like-for-like service from a 3rd party, a business case was developed to instead expand our own fibre infrastructure around Tameside linking 22 key council buildings (See **Appendix 1**) and 30 NHS Medical Centres and GP practices (See Appendix 2).

¹ It is around 4 times cheaper to install ducting as part of a wider road works project (Circa £25pm) than it is to install it on its own. (Circa £100pm).

- 1.6 The response to the DCMS call for information also explained how using a new and unique “Thin Layer Model”² and Cooperative operating vehicle we intended to commercialise this investment and leverage private sector investment and bring high speed internet services to business and residents.
- 1.7 As a result of the Council’s response the DCMS Local Full Fibre Network (LFFN) team visited Tameside in June 17. They were particularly interested in the “Thin Layer Model” and Cooperative and how using this approach we’ve successfully overcome State Aid issues.
- 1.8 Up to this point the route for the ducting and fibre was based on the location of key public sector buildings around Tameside and how they could be most cost effectively connected based on a 5 year payback business case. However this approach meant that it missed or bypassed many of the key employment areas across Tameside. This is a significant limitation as these are exactly the areas which would make the network commercially attractive to potential Telecommunications Companies (Telco’s) who we wanted to join the Cooperative and deliver services to business in the borough.
- 1.9 As a result of the session Tameside was asked to submit a funding bid for a project which would further develop our physical infrastructure, extending it to more public sector buildings and assets, whilst also accelerating its commercialisation by connecting to the key economic and employment sites/zones. In August 2017 we received confirmation from DCMS that our **£2,262,283** bid had been successful and we were to become 1 of 6 National wave 1 Local Full Fibre Network (LFFN) pilot projects.
- 1.10 In December 2017, Executive Cabinet approved further capital investment in digital infrastructure of £2,565k, and in January 2018 DCMS announced a second wave of LFFN funding. A successful Greater Manchester Combined Authority (GMCA) bid was confirmed in March 2018 and the Tameside element of this wave 2 funding is £2,120k.
- 1.11 The following table summarises the £8.435m of previous investment, current and future funding relating to the development of the Tameside Digital Infrastructure. Further detail is included in **Appendix 3**.

Work Stream	Core Infrastructure Equipment	Connectivity and resilience	Fibre Infrastructure	TOTAL
	£000s	£000s	£000s	£000s
Public Partner Funding		67	888	955
Council Investment in previous years		80	453	533
Council Capital Funding approved December 2017	1,209		1,356	2,565
DCMS Wave 1 grant funding	910	123	1,229	2,262
DCMS Wave 2 grant funding	160	158	1,802	2,120
TOTAL	2,279	428	5,728	8,435

² The Thin Layer Model refers to the way the various ducting assets paid for by partner organisations can be brought to market as a single cohesive product that can be easily made available for commercial use.

2 PROGRESS UPDATE

Fibre Infrastructure

- 2.1 A **£2,565k** Capital scheme for Fibre Infrastructure (£1,725k) and new Data Centre (£840k) was approved by the Executive Cabinet in December 2017. Since then work has been ongoing to install the resilient figure of 8 fibre network that will connect 22 key Council sites. A further 30 Health sites are also being connected to the resilient fibre ring using Health funding. This initial phase of ducting and fibre installation works is nearing completion and the new equipment, which will provide the future telecommunications, computer and CCTV connectivity for the Council, is being installed.
- 2.2 The current contract with Udata for delivering the existing Wide Area Network ceases in October 2018 and work to commission the replacement infrastructure, including state-of-the-art cyber security protection is on course for completion on-time.
- 2.3 Work to construct the new shared Data Centre in the Ashton Old Baths has been delayed due to the finalisation of funding for the Phase 3 refurbishment of the Annex. It is expected that once approval for the funding has been obtained the new facility, which will host the Council's and NHS systems, will be operational in early 2019.

The Digital Infrastructure Cooperative (TDIC)

- 2.4 Commercialisation of our public sector funded fibre network to enable Telecommunications companies to access the "dark fibre" and use it to deliver new, faster and cheaper Internet services to Tameside businesses and residents is also gathering pace. The Tameside Digital Infrastructure Cooperative (www.tdic.coop) is an independent Cooperative Society registered under the 2014 Cooperative and Community Benefit Societies Act. This means it is regulated by the FCA as a mutual society. It is a member of Co-operatives UK and subscribes to the ICA principles shared with credit unions.
- 2.5 The Cooperative has been operational since February 2018 and the Council is a member along with 6 other public sector investors and 7 private sector telecommunications companies. The Cooperative operates on a 1 member 1 vote principle so no single member can take control.
- 2.6 Each month new applications for membership are received and it's expected that Blackpool Council, Mid Suffolk Council and Liverpool City Region will apply for membership and as a result make their existing or planned ducting infrastructures available for commercial applications in same way Tameside has.
- 2.7 In the coming weeks the Council will be investing £120k in non-tradable par value shares in the Cooperative (as approved at Executive Cabinet in 2017). This investment will attract 5% return for the Council and will also mean that the Cooperative has sufficient funds to successfully sustain as a fledgling business and also buy the spare fibre capacity from the Council for £100k for use by its members.

Fibre Network Maintenance

- 2.8 Fibre networks are inherently reliable. Once installed they are not affected by external factors such as water ingress, electrical interference and cable degradation which do affect the reliability and longevity of copper cables. That said the Cooperative is putting in place a 3rd party fibre maintenance contract which will cover the day-to-day maintenance and fault fixing for all the fibre within the network. This is important for its members in order for them to provide service availability standards to businesses, residents and schools and for the public sector organisations using their own fibre. (Council, Hospital, Pennine Care, Tameside College and New Charter) to ensure faults are quickly identified and resolved. Public sector partners will be recharged pro-rata for this maintenance – from a Council point of view this is expected to be around £3k per year and this will be funded from within existing budgets.

Business Connectivity

2.9 The first commercial services using the fibre will be in place in late summer. These include the following:

- The new Summers Quay development in Stalybridge which has been fitted with a dedicated full fibre internet connection, and each of the 67 apartments also has its own full fibre link and Gigabit router. This full fibre broadband service is available to all Summers Quay residents and provides a connection speeds up to 200Mb/s with prices for a 50Mb/s connection only £15 per month. The service provider is SimplyIP a Manchester based Alter-Net (Alternative Internet Service Provider) who are a founding member of the Digital Coop.
- Clarendon Industrial Estate in Hyde is a small industrial site with a cluster of businesses including ADXBA, who are a specialist digital signage company employing around 20 people, and AP Patterns, who are industrial pattern makers. Both companies are increasingly reliant on fast reliable Internet connectivity but poor connectivity in the area is causing operational issues and one has already considered moving away from Tameside to an area with better Internet provision. By working with the DCMS Full Fibre Voucher Scheme, which provides businesses with up to £3,000 to help with fibre connection costs, and the TDIC, both businesses are now having new fibre connections with services provided by Coop members.
- Kings Grange in Audenshaw is a new Taylor Wimpey development. Phase 1 is complete but residents are only receiving Internet speeds of 4Mb/s or less. Working with one of the Coop members and using the Government Better Broadband Scheme funding, the Tameside fibre is being used to support a fixed wireless internet connection that will be located to the top of one of our lighting columns and which will provide residents with an alternative internet service which is the same price as conventional broadband but is running at 100Mb/s. To date over 20 homes have already subscribed.
- Working with Taylor Wimpey in Hyde we are planning a full fibre to premise infrastructure for the new Clarendon Road development. Initially covering 70 new builds Taylor Wimpey will install the ducting (which the Council will supply) to each home and around the site, and then this will be handed over the Council as part of the adoption process. This new infrastructure will then be made available to the Coop so it can install fibre and Coop members can offer services to residents.
- Other local business including Wood ICT located in Pattern House Stalybridge, TMJ Contractors, Cavendish Street, Ashton, Rhino Design, Hyde and JDA Architects, Denton already have, or are in the process of ordering fibre connectivity via Coop members using the DCMS Gigabit voucher scheme.

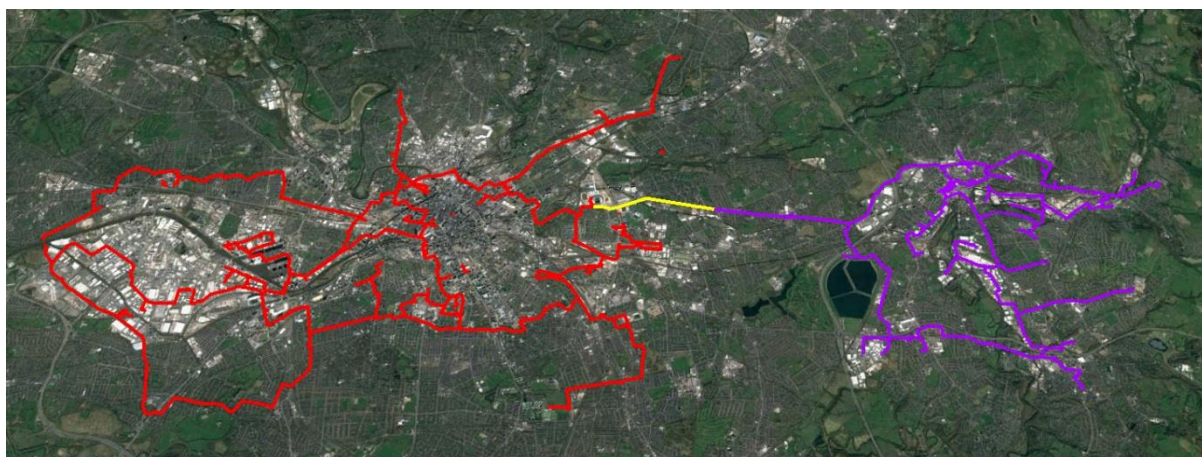
Schools Connectivity

- A number of schools including Rayner Stephens, Denton Community College and Hyde Community College have already or are in the process of ordering fibre connectivity via Coop members. Discussions are also taking place with the Department of Digital, Culture Media and Sport (DCMS) to secure funding which will enable a number of primary schools in Tameside to also be connected to the fibre including a cluster of 5 around Rayner Stephens in Dukinfield/Newton. This would only be available to Tameside and confirmation that the scheme can go-ahead, including the number of eligible schools is expected in October 2018. Other potential applications being discussed include Tameside Pupil Referral Service at Whitebridge and Elmbridge Colleges.

Northern Peering Point Connectivity

- A key element to the successful commercialisation of the Tameside Fibre Network was having a direct link into the Northern Internet Peering Point (LINX Manchester), which is based at Manchester Science Park. It is the UK's second largest Internet exchange³ and direct access to this facility enables Telcos and ISPs who are members of the TDIC to access high volume Internet backhaul at wholesale prices.
- To enable this direct "dark fibre" connection to LINX Manchester we have worked with TfGM to install fibre along the route of the Metrolink from Ashton to Piccadilly. This work is now complete and the final connection to LINX Manchester via the "The Loop"⁴ network is also in place. The Loop are themselves members of the Coop as are "The Network People Limited (TNP), who are the first ISP to use this dark fibre connectivity to deliver wholesale Internet into the Tameside fibre network. The Council's future Internet connectivity (post Udata) will also be provided by TNP using this fibre link.

2.10 The map below shows the Tameside Digital Infrastructure in purple with the connection via the Metrolink ducting to The Loop network with runs around the City Centre and to the Northern Peering Point.



Greater Manchester Pension Fund (GMPF)

2.11 The completion of the fibre down the tram-side ducting to Manchester also means that we have now been able to complete and light the fibre connection to GMPF. This new connection will be brought in to use as part of the wider migration from the Udata network in the next couple of months.

CCTV Network

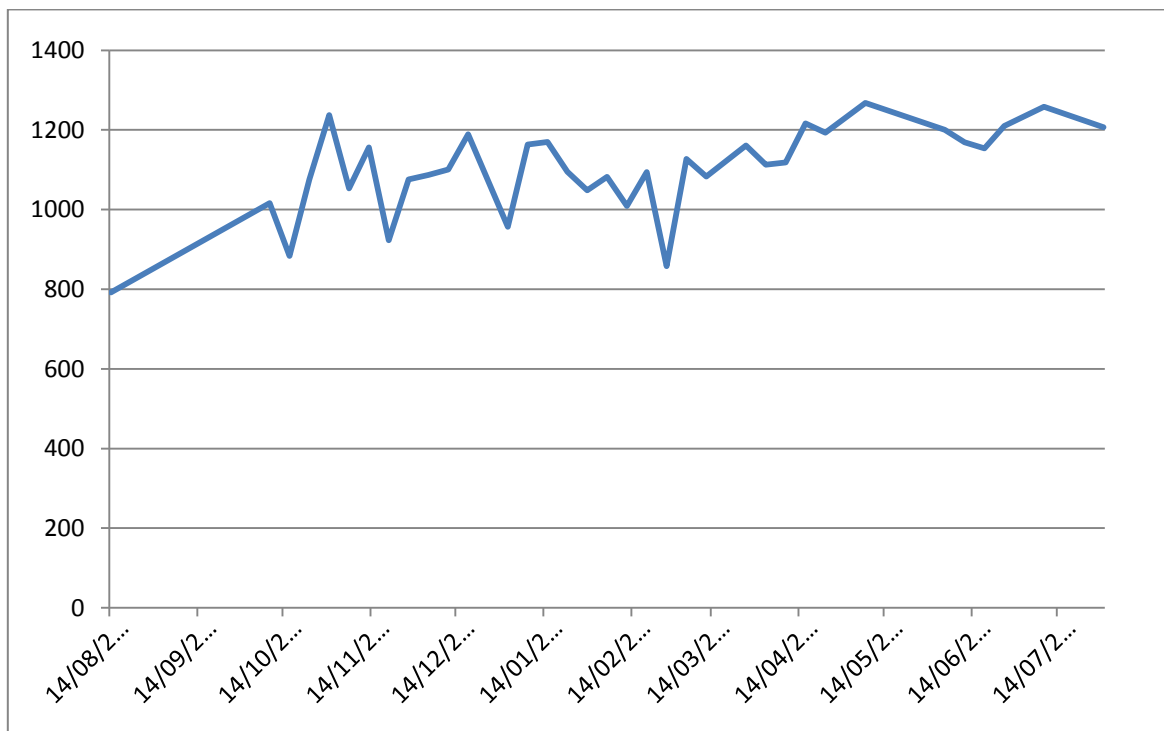
2.12 Now the Fibre network is in place it can be used to connect our fleet of CCTV cameras to the control room in Dukinfield. Not only will this save on BT line rental costs but it also means much higher quality images can be captured. The first such "proof of concept" site in Ashton (Outside Lidl) has now been completed and is fully operational. The new digital CCTV camera is mounted on top of one of the new LED lamp columns alongside a SWIFT Wi-Fi transmitter using a bracket designed by the Council. Both devices share the "fibre to the column" to provide connectivity to the Dukinfield Control Room and Internet backhaul respectively. Priority works to replace broken and failing camera's in Ashton Town Centre with new equipment based on this model is also now being planned and a capital bid for a wider programme of upgrades and replacements to the CCTV fleet is being developed.

³ The London Internet Exchange (LINX) is the largest Internet Exchange in the UK and it is itself the second largest in the world with the New York IX the largest.

⁴ The Loop are a Manchester based subsidiary of Gamma Communications and they operate a fibre ring network around the City centre.

SWIFT Town Centre Wi-Fi

2.13 The fibre network is also providing the connectivity for 47 free to use SWIFT Public Wifi Access points across all the main town centres. Originally given the green light in 2016 as one of 16 for 16 pledges the network provides the general public with high speed, monitored and controlled access to Internet via a simple single sign on system provided by local company Purple Wi-Fi. There are no restrictions on services that can be accessed – so everything from downloading music and films, to email, browsing and gaming can be freely done. Websites access is restricted to the same categories as per our public libraries PC's. The chart below show weekly usage across Tameside for the last 12 months with an average of around 1,200 unique logins per week.



2.14 Later this year following completion of the move to the dark fibre network another 60 SWIFT points will be added the Network. These will include all the public wifi access points currently provided in Council buildings such as Libraries, Town Hall and Customer Services. This will mean a single SWIFT login will provide free Internet Access across 8 Tameside Town Centres and 40 Council buildings.

Fibre Ready Lamp Columns & 5G

2.15 The “fibre ready” lamp columns (as are being used for the Kings Grange connectivity and Ashton (LIDL) proof of concept) also present a unique opportunity for Tameside to play a key role in the development and deployment of 5G mobile network. Unlike previous mobile networks that use masts, 5G relies on small cell technology which has a limited 200m coverage radius. (Similar to the existing SWIFT Wi-Fi access points). This means that hundreds of 5G transmitters are needed to provide an area like Tameside with coverage and street lighting columns provide an ideal platform for the transmitters to be mounted on. However, because of the high speeds that 5G will operate at (1GB as compared to 40Mb for 4G) each transmitter has to be connected to a fibre backbone. Whilst the Greater Manchester Combined Authority (GMCA) 5G Test Pilot bid has been unsuccessful, Tameside has already expressed an interest in being a “Fast Follower” with the DCMS 5G Team so that the borough is amongst the first areas of the UK to have the service available.

Ashton Old Baths Data Centre & Digital Exchange

2.16 The new Data Centre in Ashton Old Baths will become a crucial digital hub not only for the Council's and NHS computer systems but also for the telecommunications companies

delivering services through the Coop. ISPs need rack space where they install their telecommunications equipment and “light” the fibre cables. Traditionally this has only been possible in BT exchanges, access to which are restricted and requires an application process that is both complex and then expensive to service. In Tameside we will have the Ashton Digital Exchange within our new Data Centre and 8 Mini Digital exchanges around Tameside that are supplier neutral and available to all Coop members at low rental prices.

- 2.17 To bridge the gap until the new Data Centre is operational, temporary facilities in Ashton Old Baths and Ashton Central Library have been put in place, which means we can continue with the work to migrate our connectivity away from the Udata network and also provide rack space for Coop members to deliver their services from. Rack space in the hospital’s Data Centre is also being used by the Council to support the migration from Udata and to provide a Disaster recovery site for key Council systems in the future.

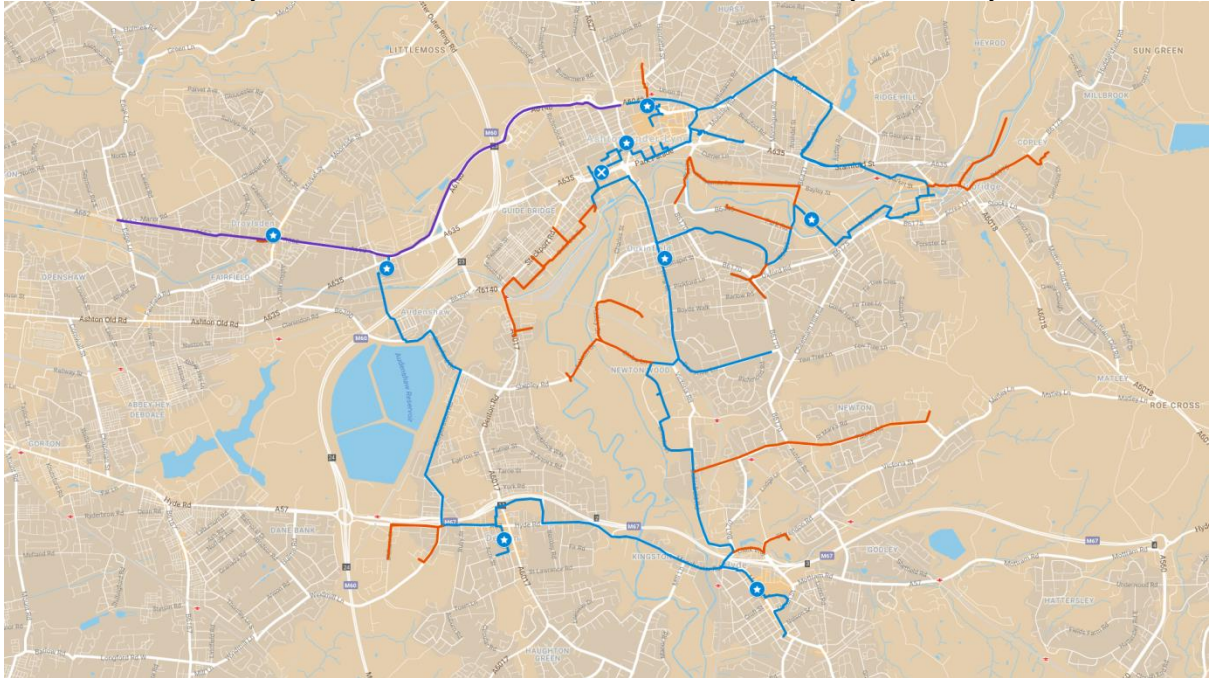
DDCMS Local Full Fibre Programme Wave 2 Funding

- 2.18 In January 2018 the DCMS announced a second round of LFFN funding. Greater Manchester Combined Authority (GMCA) coordinated a pan-Manchester **£23,800k** bid involving 10 local authorities, Police, Transport for Greater Manchester and Greater Manchester Health & Social Care Partnership with the aim of increasing fibre to the premise coverage across Greater Manchester from 2% to 25% by 2020. This approach was approved by GMCA on 26 January 2018.
- 2.19 The Tameside element of the bid was **£2,120k** and based on expanding our existing re-use of public assets model, with further commercialisation through the Digital Cooperative. Working with Network Rail and using their track side troughs, the submission involves expanding the fibre infrastructure to an additional 23 CCTV sites and public sector buildings in Mossley, Hattersley, Broadbottom, Hadfield and Glossop. A full list of all the buildings being connected is listed at **Appendix 5**.
- 2.20 On 12 March 2018 DCMS confirmed that the GMCA bid for Wave 2 LFFN funding had been successful.
- 2.21 The Local Full Fibre Network (LFFN) programme is now considering a third wave of funding which will build on the principles and investment made in waves 1 and 2. Key partners in this would be LINX (The London Internet Exchange who also own and operate the LINX Manchester), Network Rail plus various cities, including Greater Manchester, Liverpool City Region, Blackpool, Sheffield, York and Kirklees. Ultimately this would have the potential to create a northern, distributed peering network that would fuel digital sector growth across the North and which would have Tameside and the Ashton Digital Exchange at the core.

3 WAVE 1 LFFN PROJECT UPDATE

- 3.1 The **£2,262k** DCMS grant is intended to both accelerate the deployment of fibre across Tameside and support its commercialisation. Key elements/deliverables of the successful Wave 1 bid are detailed below and the table at **Appendix 3**. Appendix 3 also details the complimentary elements of work funded through the Council’s Capital Scheme (approved by Executive Cabinet in Dec 2017).
- Additional 96 core fibre cable to be installed around the core figure of 8 network to provide additional capacity.
 - Additional 13.5km of ducting and fibre optic cables to connect high employment and industrial sites across Tameside.
 - Provision of a Digital Exchange facility in the new Data Centre being built at Ashton old Baths and 8 mini digital exchanges located across Tameside.
 - A new resilient fibre link to IX Manchester.

- 3.2 The map below shows the core resilient figure of eight fibre network that the Council and partners have developed (blue). In addition are the red spurs which are the additional ducting and fibre that the DCMS grant has enabled. It also shows the location of the new Digital Exchange (DX) located within the new Data Centre being built in Ashton old Baths and 8 Mini Digital Exchanges located around Tameside. The fibre installed in trackside ducting along the side of the Metrolink route is shown in purple and is only shown up to the Tameside boundary. The link does continue on down to Piccadilly in the City Centre.



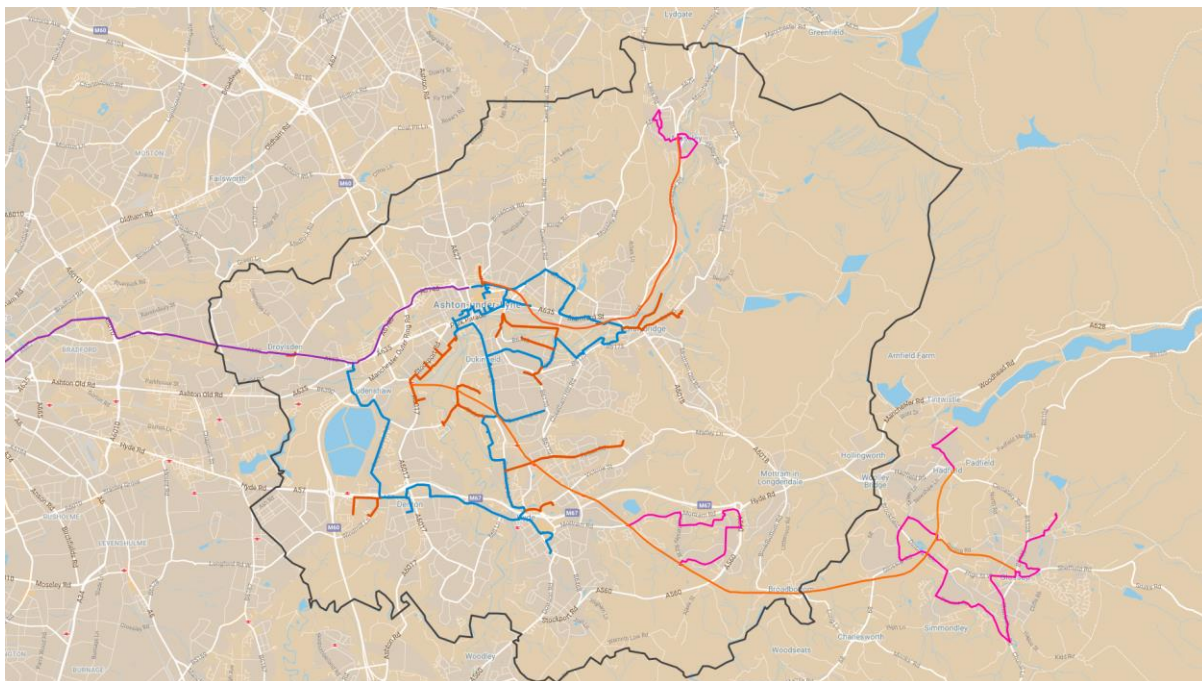
- 3.3 The Digital Exchange and Mini DX's are secure landing points (rack space) where ISP members of the Cooperative can locate their telecommunications equipment.
- 3.4 The Grant Funding Agreement was signed with DCMS in February 2018 and the table at Appendix 4 show progress towards completing both Tameside Capital scheme elements and DCMS funded elements. It also includes key management and performance data such as duct distances, number of fibre pairs installed, properties and businesses passed and costs.
- 3.5 Once the Tameside funded works and Wave 1 works are complete 35% of business and residential properties in Tameside will be within economical connection distance of the fibre network, and also any potential 5G roll-out. Shown in the table below. This compares with the national figure of 3% and 2% across Greater Manchester.

Property type	Number within 200m	
Business	3,826	52%
Residential	33,960	33%
Total	37,786	35%

4 WAVE 2 LFFN PROJECT UPDATE

- 4.1 In January the DCMS announced a second round of LFFN funding. Greater Manchester Combined Authority coordinated a pan-Manchester £23.8m bid involving 10 local authorities, Police, Transport for Greater Manchester and Greater Manchester Health & Social Care Partnership with aim of increasing fibre to the premise coverage across Greater Manchester from 2% to 25% by 2020. This approach was approved by GMCA on 26th January.

- 4.2 With the exception of Manchester City Council, Transport for Greater Manchester and Tameside Council all other partners based their bid/requirements on a Public Sector Anchor Tenancy Model. This requires public sector partners to commit to lengthy contracts with telecommunications companies for fibre connectivity to 1500 key locations across the region. The capital costs for this new infrastructure are met by the private sector, with the contract awarded through a pre-tendered procurement framework. The businesses case for the investment is based on a 20 year payback period meaning long term rental agreements for these links will have to be signed.
- 4.3 The Tameside element of the successful bid is **£2,120k** and was based on expanding our existing re-use of public assets model, with the further commercialisation through the Digital Cooperative. Working with Network Rail and using their track side troughs, the submission involves expanding the fibre infrastructure to an additional 23 CCTV sites and public sector buildings in Mossley, Hattersely, Broadbottom, Hadfield and Glossop. A full list of all the buildings being connected is listed at **Appendix 5**.
- 4.4 In Broadbottom it is intended to use the new fibre connectivity to provide new SWIFT free public Wi-Fi into the village centre. The fibre network could then be used for any future CCTV requirements but also the intention is to work with a community broadband supplier such as B4RN⁵ to develop a high speed internet service for residents.
- 4.5 Expanding the network in Glossop and Hadfield means that the GPs and Medical Centres that Tameside and Glossop CCG are responsible for will have the same high speed connectivity as the rest of Tameside. The bid also included provision of an additional resilient link using track side troughs to LINX Manchester and across the City Centre.⁶



- 4.6 The DCMS announced that the Greater Manchester bid had been successful in March 2018. The due diligence process to move the project to a point where a funding agreement can be put in place is now underway. It has been agreed by Tameside, DCMS and GMCA that the Tameside element of funding will be moved out of the wider GM funding pot and added to the existing Wave 1 Grant Funding Agreement as an addendum. This will mean that work

⁵ B4RN is a professionally designed fibre optic broadband network, registered as a non-profit community benefit society, and run by a dedicated local team with the support of landowners and volunteers. They offer 1,000Mbps FTTH broadband to every property in coverage areas, costing households only £30 per month

⁶ Connection via the existing TfGM tramside fibre at Piccadilly to the Oxford Road Corridor Project

on this new phase of work can commence in late summer with design and planning work already underway.

4.7 Key elements/deliverables of the successful Wave 2 bid are detailed below and in the table at appendix 3.

- Provision of a second diverse direct fibre route from the Tameside Digital Exchange into LINX Manchester Via Network Rail Infrastructure.
- Provision of a new direct fibre route from the Tameside Digital Exchange into Leeds Peering point with provision for 10 meet me access points along the route.
- Provision of a new direct fibre route from Tameside Digital Infrastructure to Glossop with meet me points at Hattersley, Hyde, Broadbottom, Hadfield and Glossop.
- Installation 10km of ducting and dark fibre infrastructure to connect Health and Public sector buildings in Hadfield and Glossop.
- Installation of 5km of ducting, dark fibre and a mini DX in Mossley and Hattersley to connect health and public sector buildings and CCTV equipment.
- Installation of a new cross city centre fibre optic cable from Piccadilly Station to meet me point at Oxford Road Corridor project.

4.8 Once the Wave 1, Wave 2 and the Tameside funded works are complete 42% of business and residential properties in Tameside will be within economical connection distance of the fibre network, and also any potential 5G roll-out. As shown in table below. This compares with the national figure of 3% and 2% across Greater Manchester.

Property type	Total Number	Number within 200m	
Business	7406	4,406	59%
Residential	101,730	41,608	41%
Total	109,136	46,014	42%

5 RECOMMENDATIONS

5.1 As set out at the front of the report.

APPENDIX 1

Council Sites Connected to the Dark Fibre Network

Tameside - Site Ref	Site Name	Street Address	Post Code
ASHTONF01	Dukinfield Town Hall	King Street, Dukinfield	SK16 4LA
HYDEF01	Hyde Town Hall	Market Street, Hyde	SK14 1AL
STALYF03	Stalybridge Civic Hall	Trinity Street, Stalybridge	SK15 2BN
CLARENCE ARCADE	Clarence Arcade	Stamford Street, Ashton Under Lyne	OL6 7PT
ASHTON091	Ashton Market Hall	Ashton Under Lyne	OL6 6BZ
STALYF01	Tame Street Depot	Tame Street, Stalybridge	SK15 1ST
DENTOF02	Denton Centre	Acre Street, Denton	M34 2BW
ASHTON019	Public Health	Ashton Under Lyne	OL6 7SR
TAMESIDE CENTRAL LIBRARY	Tameside Central Library	Ashton Under Lyne	OL6 7SG
DENTOF01	Denton Town Hall	Market Street, Denton	M34 2AP
DROYLF02	Ryecroft Hall	Manchester Road, Audenshaw	M34 5ZJ
DROYLF03	Concorde Suite	Droylsden	M43 6SF
HYDE009	Hyde Market Hall	Market Hall, Hyde	SK14 2QT
ASHTON099	Dukinfield Crematorium	Hall Green Road, Dukinfield	SK16 4EP
ASHTON094	Tameside General Hospital	Ashton Under Lyne	OL6 9RW
ASHTON004	Connections Office/ Youth Offending	Ashton Under Lyne	OL6 7PT
MSCP ASHTON	MSCP ASHTON	BROOKDALE AVE	OL6 7UD
DROYLF01	Droylsden Library	Manchester Road, Droylsden	M43 6EP
ASHTONF04	Dukinfield Library	Concord Way, Dukinfield	SK16 4DB
STALYF02	Stalybridge Library	Trinity Street, Stalybridge	SK15 2BN
DENTOF03	Denton Library	Peel Street, Denton	M34 3JX
DROYL0010	GM Pension Fund New Build(GMPF Plot 18)	Droylsden	M43 6EP

APPENDIX 2

Medical and GP Surgeries being connected to the Dark Fibre Network

- 1) Tameside Hospital
- 2) Gordon Street Medical Centre
- 3) Stamford House Medical Centre
- 4) Willows Hospice
- 5) Staveleigh Medical Centre
- 6) Stalybridge Clinic
- 7) St Andrews House Medical Centre
- 8) Lockside Medical Centre
- 9) Grosvenor Medical Centre
- 10) Dukinfield Medical Practice (Davaar Site)
- 11) Dukinfield Medical Practice (Hollies Lane)
- 12) Dukinfield Town Hall Medical Practice
- 13) King Street Medical Practice
- 14) Dewsnap Lane Health Centre
- 15) Brooke Surgery
- 16) Clarendon Medical Practice
- 17) Donneybrook
- 18) Selbourne House
- 19) Union Street Clinic
- 20) Haughton Thornley Medical Centre
- 21) Ann Street Health Centre
- 22) Churchgate
- 23) West End Medical Centre
- 24) The Highlands Medical Centre
- 25) Guide Bridge Medical Centre
- 26) Crickets Lane Health Centre
- 27) Tame Valley Medical Centre
- 28) Penny Meadow Medical Centre
- 29) Chapel Street Medical Centre
- 30) Albion Medical Centr

APPENDIX 3

Tameside Capital and DCMS Grant funded elements

Ref	Project component	Status	Funding					Impact
			Public Partner Funding £000s	Council Investment in previous years £000s	Capital Funding approved Dec 2017 £000s	DCMS Wave 1 Grant £000s	DCMS Wave 2 Grant £000s	
Core Infrastructure Equipment								
1	Ashton Old Baths data centre/digital exchange	Planning			840	300		Service Resilience and cost avoidance.
2	Tameside-8 DX-PoPs	Under construction				610		Digital and service provider engagement; sector seeding in other centres.
3	2 Additional Tameside DX-PoPs	Planning Awaiting Project Agreement					160	Digital and service provider engagement; sector seeding in other centres.
4	Dark Fibre Switches for sites added to fibre network and Core infrastructure				369			Service Resilience and cost avoidance.

Ref	Project component	Status	Funding					Impact
			Public Partner Funding £000s	Council Investment in previous years £000s	Capital Funding approved Dec 2017 £000s	DCMS Wave 1 Grant £000s	DCMS Wave 2 Grant £000s	
Connectivity and Resilience								
5	Tramside fibre install to IX Manchester, including contributions from: Manchester City Council GM Pension Fund	Complete		80				Public sector cost savings. Potential benefits sharing with private sector.
			30					
			37					
6	Additional Internet backhaul for resilience.	Complete				123		Additional fibre link from Clayton Hall Tramstop to Etihad Stadium to provide link to Gamma Loop Network.
7	Provision of a second diverse direct fibre route from the Tameside Digital Exchange into IX Manchester Via Network Rail Infrastructure.	Planning Awaiting Project Agreement					98	Service resilience.
8	Installation of a new cross city centre fibre optic cable from Piccadilly Station to meet me point at Oxford Road Corridor project	Planning Awaiting Project Agreement					60	Network resilience and public sector owned route to IX Mcr.

Ref	Project component	Status	Funding					Impact
			Public Partner Funding £000s	Council Investment in previous years £000s	Capital Funding approved Dec 2017 £000s	DCMS Wave 1 Grant £000s	DCMS Wave 2 Grant £000s	
Fibre Infrastructure								
9	Ashton/Hyde fibre network, including contributions from: TC New Charter Housing Trust Ashton 6th Form College Tameside Hospital Pennine Care NHS Trust Tameside and Glossop CCG	Complete.		453				Service improvements and cost avoidance.
			85					
			156					
			16					
			336					
			135					
			160					
10	Tameside-8 ring 23km ducting and fibre	Under construction			1,356			Service Resilience and cost avoidance.
11	Enhance Tameside 8-ring (17km ducting and fibre)	Under construction				1,179		Digital and service provider engagement; sector seeding in other centres.
12	Deployment accelerator	Complete				50		Faster deployment of fibre network and setting up of Coop and other assets (Digital Exchanges).

Ref	Project component	Status	Funding					Impact
			Public Partner Funding £000s	Council Investment in previous years £000s	Capital Funding approved Dec 2017 £000s	DCMS Wave 1 Grant £000s	DCMS Wave 2 Grant £000s	
13	Installation 15km of ducting and dark fibre infrastructure into Hattersley, Mossley, Hadfield and Glossop.	Planning Awaiting Project Agreement					1,680	Better connectivity for public buildings (Council and NHS) and CCTV Equipment.
14	Provision of a new direct fibre route from Tameside Digital Infrastructure to Glossop with meet me points at Hyde, Broadbottom, Hadfield and Glossop	Planning Awaiting Project Agreement					80	Improved connectivity.
15	19 x Public buildings ftp connections (Ave distance 20m)	Planning Awaiting Project Agreement					42	Improved connectivity.
TOTALS			955	533	2,565	2,262	2,120	

APPENDIX 4

Fibre Infrastructure Management and Performance Data for Tameside funded works and DCMS Wave 1 works.

Ref	Description	Status	% Complete	DCMS Funding	TMBC Funding	Metrolink	Total Ducting Available KMs ducting	Fibre Laid Cores	Access Points Number	Premises Passed on completion =<200m				Premises Passed on completion =<50m			
										Residential	Business	Public & medical	Educ	Residential	Business	Public & medical	Educ
1	Pink Route - Tameside General Hospital to Stalybride	Complete	100%	£1,179,000	£1,366,000	£120,000	2320	144	91	2239	199	26	1	1454	44	14	1
2	Blue Route - Ashton Town Centre to TGH	Complete	100%		£103,097		1330	144	24	8493	691	67	10	6781	349	38	4
3	Red Route - Stalybride to Dukinfield	Ongoing	90%		£318,594		4110	144	52	3177	253	34	4	2503	107	14	0
4	Light Blue Route - Hyde to Denton	Ongoing	95%		£242,472		3128	144	50	2070	190	18	4	1883	112	13	0
5	Green Route - Dukinfield Globe Lane to Hyde	Ongoing	95%		£240,534		3103	144	139	2343	467	30	3	1980	209	19	1
6	Orange Route - Denton to Audenshaw	Ongoing	95%		£281,463		3631	144	50	3134	50	9	6	2476	22	3	0
7	TMBC funded - Ashton to Droylsden (Metrolink)	Complete	100%			£64,000	4500	96	3	3668	101	17	4	3402	57	14	3
	TMBC funded - Droylsden to Piccadilly	Complete	100%			£56,000	5900	48	2	0	0	0	0	0	0	0	0
	TMBC funded - Calyton Hall to Etihad	Complete	100%		£97,648		810	96	2	0	0	0	0	0	0	0	0
8	DCMS funded Park Road			£63,850			628	96	19	181	118	0	0	120	56	0	0
9	DCMS funded Whitelands Road	Ongoing	60%	£152,597			1700	96	23	568	121	0	1	410	104	1	0
10	DCMS funded Fifth Ave	Ongoing	1%	£114,097			1300	96	21	106	143	2	1	76	75	0	1
11	DCMS funded Spur to Shepley	Ongoing	1%	£57,175			523	96	16	54	46	0	0	54	30	0	0
12	DCMS funded Newton Business Park			£212,228			2277	96	41	2252	271	3	2	2155	194	2	1
13	DCMS funded Northend Road	Ongoing	95%	£98,014			1056	96	24	726	100	0	0	333	30	0	0
14	DCMS funded St. Pauls Trading Estate			£95,494			1090	96	19	1524	94	15	2	159	38	6	1
15	DCMS funded Turner Lane			£35,103			340	96	10	567	99	1	0	476	73	1	0
16	DCMS funded Windmill Lane			£44,789			439	96	14	552	434	0	0	221	228	0	0
17	DCMS funded Oldham Street			£80,635			786	96	22	139	307	0	0	84	183	1	0
	DCMS Funded Cavendish Mill	Complete	100%	£5,700			35	8	2	52	0	0	0	52	0	0	0
	DCMS funded Summers Quay	Complete	100%	£27,200			270	8	4	67	0	0	0	67	0	0	0
	DCMS funded MossCare			£9,320			70	8	4	40	0	0	0	40	0	0	0
18	DCMS Funding Clarendon Trading Estate	Ongoing	95%	£74,715			628	96	23	267	28	1	1	219	18	1	0
19	DCMS Funding Stockport Road / Guide Bridge	Ongoing	60%	£230,366			2360	96	57	1741	114	9	3	1625	88	6	0
				£1,301,284	£1,463,648	£120,000	42334		712	33960	3826	232	42	26570	2017	133	12

APPENDIX 5

Wave 2 Locations

Mossley

- 1 Penning Medical Centre, 193 Manchester Rd, Mossley, Ashton-under-Lyne OL5 9AJ
- 2 Mossley Medical Practice, 187 Manchester Rd, Mossley, Ashton-under-Lyne OL5 9AB
- 3 Mossley Medical Centre, Market St, Mossley, Ashton-under-Lyne OL5 0HE
- 4 Mossley Fire Station, 19-21 Anthony St, Mossley, Ashton-under-Lyne OL5 0HU
- 5 Mossley Library, Stamford St, Mossley, Ashton-under-Lyne OL5 0HR (mini DX Location)
- 6 CCTV Camera's 56, 57, 58
- 7 CCTV Camera's 59, 60, 61

Hattersley, Glossop and Hadfield

- 8 Manor House, 82 Brosscroft, Hadfield, Glossop SK13 1DS
- 9 Manor House Surgery, Manor St, Glossop SK13 8PS
- 10 Lambgates Health Centre, Wesley St, Hadfield, Glossop SK13 1DJ
- 11 Simmondley Medical Practice, 15 Pennine Rd, Glossop SK13 6NN
- 12 Howard Medical Practice, Howard St, Glossop SK13 7DE
- 13 Cottage Lane Surgery, 47 Cottage Ln, Glossop SK13 6EQ
- 14 Hattersley Group Practice, Hattersley Rd E, Hyde SK14 3EH
- 15 The Hub, Stockport Road, Mottram in Longdendale, Hattersley SK14 6NT
- 16 Glossop PCC – George Street, Glossop, Derbyshire, SK13 8AY
- 17 CCTV Camera's 52 & 91
- 18 Glossop Fire Station, Whitfield Park, Glossop, SK13 8LG
- 19 Glossop Ambulance Station, 59 Chapel St, Glossop SK13
- 20 Glossop PCC – George Street, Glossop, Derbyshire, SK13 8AY
- 21 Hollingworth Clinic - Market St, Hollingworth, Hyde, SK14 8HR
- 22 The Smithy Surgery - 4 Market St, Hollingworth, Hyde SK14 8LJ
- 23 Awburn House - Awburn House, Mottram Moor, Mottram, Hyde SK14 6LA