Report To:	**STRATEGIC PLANNING AND CAPITAL MONITORING PANEL**
Date:	14 March 2016
Reporting Officer:	Tim Rainey – Assistant Executive Director, Digital Services
Subject:	**SMART TAMESIDE: TOWN CENTRE WI-FI**
Report Summary:	The Tameside Digital Infrastructure is a vendor neutral dark fibre network which runs in and around Ashton Town Centre and St Petersfield. It has been operational for over 12 months delivering connectivity for data and telephony for Council staff and services in various locations.
	The Council installed this new digital technology infrastructure to transform public services by offering new and superior service at lower cost. It also saw digital technology as a driver for economic growth, directly through the development of digital sector and related businesses, and indirectly through the impact on productivity in the wider economy.
	There is an opportunity to link these objectives for digital transformation by working with partners from the public and private sectors to jointly expand the infrastructure that now exists so it can be shared with other organisations and businesses to help economic regeneration in the Tameside area and promote digital inclusion.
	This report details an ambitious project to overlay a free-to-use Town Centre Wi-Fi infrastructure on top of the dark fibre network which will provide the public in Ashton and Droylsden Town Centres with ubiquitous internet access.
	The report goes on to detail the costs associated with expanding this Wi-Fi network across the other 7 Town Centres in Tameside using both the dark fibre network and the Council's existing Wide Area Network to provide the internet connectivity.
Recommendations:	That it is recommended to Cabinet that Capital funding for the phase 2 expansion of the free to use public Wi-Fi network into Audenshaw, Denton, Stalybridge, Hyde, Hattersley/Longdendale, Dukinfield and Mossley of £134,951 is approved.
Links to Sustainable Community Strategy:	There are no direct Community Strategy implications within this report.
Policy Implications:	There are no direct policy implications within this report.
Financial Implications: (Authorised by the Section 151 Officer)	There is currently no funding available for this project. The project cost of £134,951 requires approval to be funded and included within the Capital Programme.
	The capital investment will assist with the delivery of the council's pledges and will assist with enabling service users access Council services. Although this is difficult to quantify at this stage it is anticipated that this investment will assist

with the delivery of savings.

The ongoing revenue costs associated with the investment will be funded from existing Council budgets within the funding envelope for Digital Tameside.

Consideration must be given to any revenue costs arising as a result of the capital financing, it is anticipated that these would be funded through the service area.

The report sets out work which is being undertaken alongside third parties such as New Charter Housing Trust. Any costs arising as a result of this work will be funded by the relevant third party.

Legal Implications: **(Authorised by the Borough Solicitor)**	The report doesn't set out how the provision will be procured or installed and this mist therefore comply with all necessary legal requirements before any liability is incurred should this expenditure be approved.
Risk Management:	The service will need to create a risk register to ensure deliverables achieved within the cost approved.
Access to Information:	The background papers relating to this report can be inspected by contacting Tim Rainey, Assistant Executive Director, Digital Services:-

Telephone:0161 342 3299

e-mail: tim.rainey@tameside.gov.uk

1. INTRODUCTION

1.1. Tameside Metropolitan Borough Council has installed new digital technology infrastructure to transform its own public services, offering new and superior service at lower cost. It also sees digital technology as a driver for economic growth, directly through the development of digital sector and related businesses, and indirectly through the impact on productivity in the wider economy.

1.2. There is an opportunity to link these objectives for digital transformation by working with partners to jointly expand the infrastructure that now exists so it can be shared with other organisations and businesses to help economic regeneration in the Tameside area. Alongside the Council using the new infrastructure to link 7 of its sites in Ashton Town Centre, Dark fibre is also being installed into the Ashton Old Baths development and it will be used to provide connectivity to the businesses based there.

1.3. In addition other public sector partners are also investing in the network. Greater Manchester Pension Fund have agreed funding to help extend the fibre network into their new HQ in Droylsden and Tameside College have funded an £80k extension of the network to link its Beaufort Road site with their new Ashton Town Centre facility. The Pennine Care Trust has recently commissioned a link into their St Petersfield HQ and Ashton Pioneer Homes are using the network to provide their high rise tenants with access to the Internet. Others such as Tameside General Hospital and New Charter Housing are also actively engaged and keen to exploit the opportunities that connectivity brings with plans to extend the network to Globe Lane industrial estate, and in so doing connect Dukinfield Town Hall and Town Centre and also the main hospital site being developed.

> **Case Study: York City Centre Wi-Fi**
>
> In July 2014, York introduced a Free, unlimited public Wi-Fifi network across the City Centre consisting of 14 City Connect Zones the network was funded by the Department of Culture Media and Sport as part of York's Super Connected Cities project.
>
> Along with free Wi-Fi in the City Connected Zones, they also have public access in their libraries, corporate buildings and 6 park and ride sites. Alongside supporting local business and public, through the Purple Wifi analytic tools the network is also proving to be an invaluable resource in supporting the council's work to further understand and monitor how the city centre is used to help future prosperity and growth.
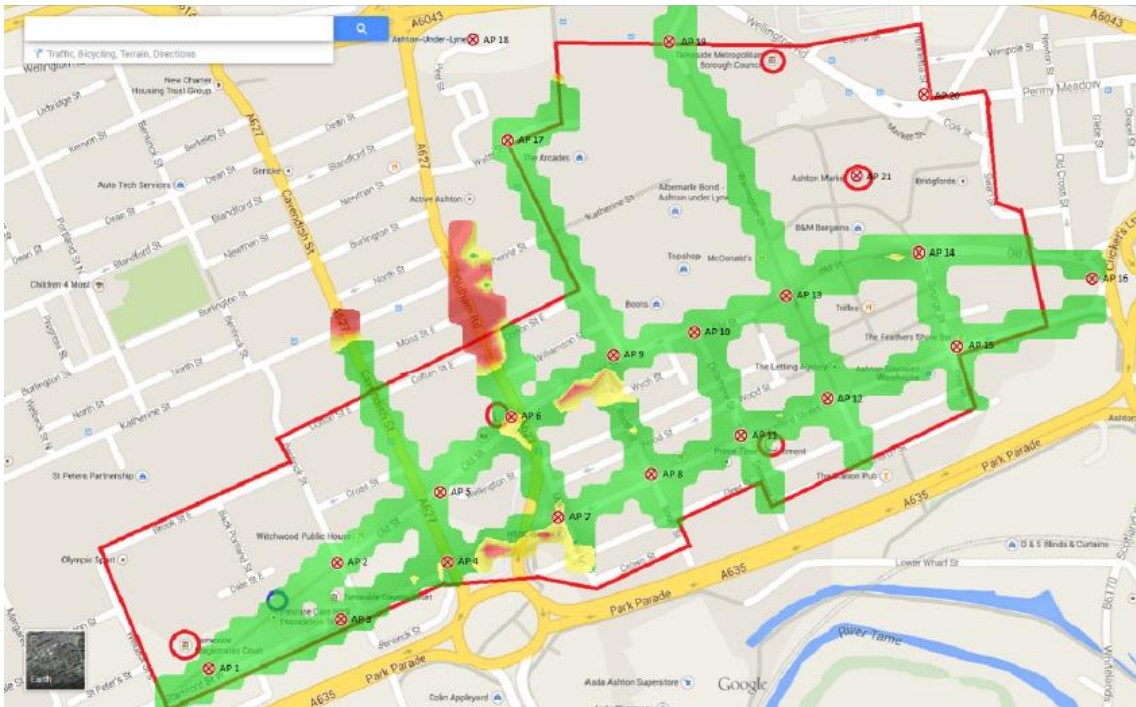>
> In the first 3 months of operation the network received more than 1 million hits.

2. PHASE 1: TOWN CENTRE FREE-TO-USE PUBLIC WI-FI

2.1. The advent of the dark fibre network in Ashton and Droylsden Town Centres brings with it the opportunity to use the cheap, fast and accessible Internet connectivity to support the roll out of an extensive free-to-use Town Centre Wi-Fi network.

2.2. Building on the Council's existing Wi-Fi infrastructure free-to-use public Wi-Fi is initially being made available across the two Town Centre's (as shown below). Supporting the same browsing policies as our Libraries, the network will seamlessly connect users in any library, Market Hall, council building or either Town Centre to the internet as they move around. The first phase of the work is underway and will be complete in Spring 2016.
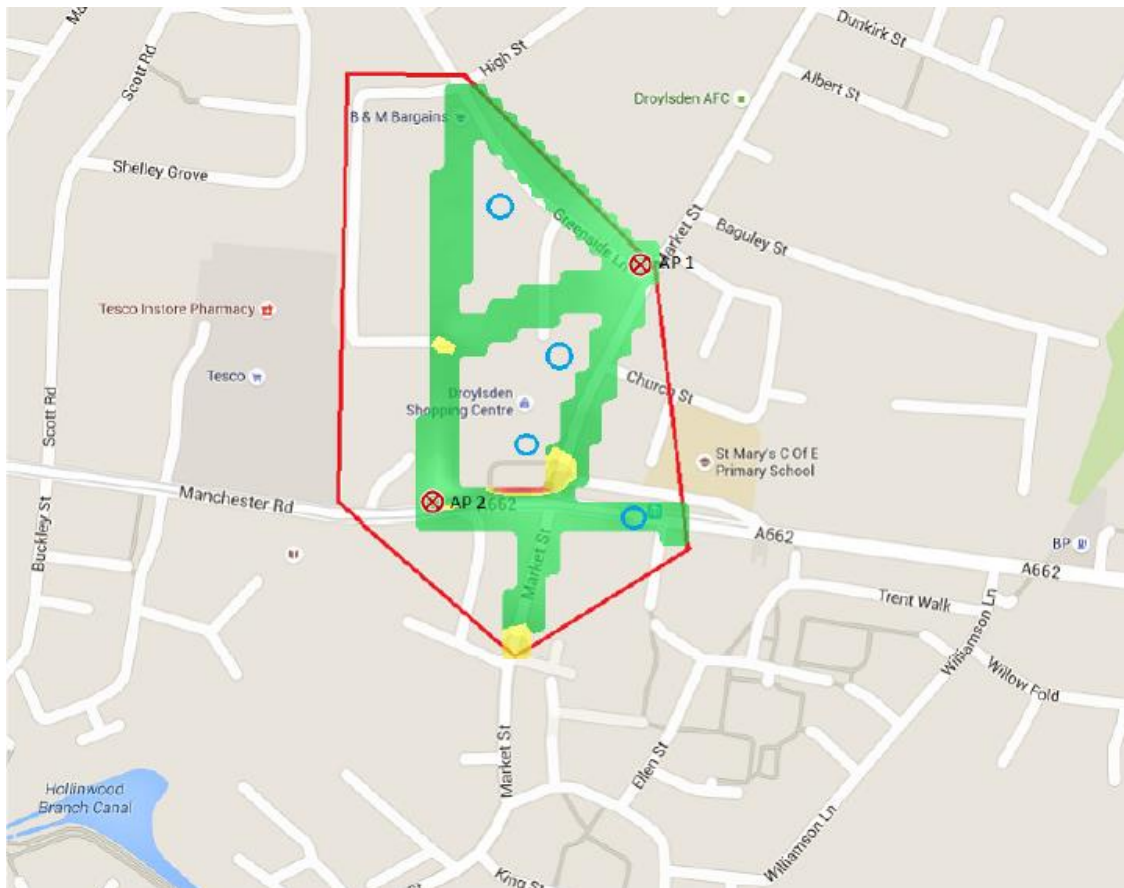
Ashton Town Centre – Wi-Fi coverage

2.3. 21 new external access points will be installed across the Town Centre providing extensive high quality Wi-Fi service throughout. Including the existing Wi-Fi access points in council and college buildings will be this will create 25 connection zones.

Droylsden Town Centre – Wi-Fi coverage

2.4. In addition the Wi-Fi already available at the library and Pension Fund building 3 external connection zones will be installed around the Town Centre.

3. PHASE 2: OTHER TOWN CENTRE FREE-TO-USE PUBLIC WI-FI

3.1. Costings for the wider roll out of free-to-use Town Centre Wi-Fi for Audenshaw, Denton, Stalybridge, Hyde, Hattersley/Longdendale, Dukinfield and Mossley are detailed below. The first stage of the implementing Wi-Fi into each Town Centre is to undertake technical surveys in each Town Centre to accurately map signal coverage. Each Wi-Fi access point can transmit a signal over a 200m radius; however the quality and penetration of the signal is dependent on local environmental variables such as height and density of buildings.

3.2. Following the survey work heat maps will be produced for each Town Centre detailing the coverage and options for the location of access points. These will then be discussed with the appropriate Elected Members and Town teams to finalise positions.

3.3. It is intended to initially install 3 Wi-Fi access points in each Town Centre outside of Ashton, however more points can be added later if and when required. In each case the first "master" access point will be located on a council building which will act as the gateway to the internet for other access points. The proposed locations for each of the "master" access points are also included in table below.

3.4. Each "master" access point can support 2 "slave" access points running off it. These "slave" access points will be fixed to street lighting columns or other suitable structures and will only need the host structure to provide power. They will need to be sited within 200m of another access point and will then daisy chain back to the master access point which provides the Internet connectivity. All the access points will be physically installed by the in-house Street Lighting Team.

3.5. The table below details the capital costs that would be required to complete the Wi-Fi project. Revenue costs for the ongoing support and maintenance of the equipment will be met from existing service budget.

Master AP Location	No's of AP's	Unit Cost	Total AP Cost	Power and Install	Wifi Survey	Infra-structure	Total Cost
Audenshaw Ryecroft Hall	3	£2,826	£8,479	£4,800	£600		
Hattersley Hub	3	£2,826	£8,479	£4,800			
Denton Festival Hall	3	£2,826	£8,479	£4,800	£600		
Hyde Town Hall	3	£2,826	£8,479	£4,800	£600		
Stalybridge Civic	3	£2,826	£8,479	£4,800	£600		
Dukinfield Town Hall	3	£2,826	£8,479	£4,800	£600		
Mossley George Lawton	3	£2,826	£8,479	£4,800	£600		
Fortisgate Server						£18,400	
Purple Wifi						£20,000	
			£59,351	£33,600	£3,600	£38,400	**£134,951**

3.6. The initial Town Centre surveys will be undertaken during April 2016 with the heat maps available for agreement in early May. The physical installation of the access points will begin in May and be completed by mid-July with the entire network available for public use during August.

> **Case Study: Tameside Wi-Fi Network**
>
> The Tameside Public Wi-Fi Network will be one of the most extensive free-to-use public Wi-Fi networks outside of major City Centre in the UK. Coverage will include 9 major Town Centres with 45 external connection zones, further supplemented by connectivity in 30 other Council buildings across Tameside.
>
> Working with partners including Tameside College, Pennine Care Mental Health Trust, Tameside Hospital, Ashton 6th Form College and Transport for Greater Manchester this coverage will be further extended to provide seamless connectivity for the public, patients, students and businesses.
>
> Using the powerful analytical data produced from the Purple Wifi system, usage of the network can be used to help better understand visitors to the Town Centre's, where they come from, where they shop and the routes they take.

4. PHASE 3: OTHER PARTNER WI-FI NETWORKS

4.1. Once the Free-to-use Wi-Fi network has been established across Tameside it can then be linked to other Wi-Fi networks operating in Tameside. Federated access can be setup which would allow students at Ashton 6th Form College and Tameside College to remain connected to their campus Wi-Fi's as they travelled through our Town Centres. Similarly patients and visitors at Tameside hospital could remain connected to the Town Centre Wi-Fi network when at the hospital site.

5. PHASE 4: SOCIAL INCLUSION - TENNANTS WIFI NETWORKS

5.1. As part of the Ashton Town Centre Wi-Fi project, work is progressing with New Charter Housing Trust (NCHT) to install Wi-Fi connectivity in to the St Petersfield Estate, off Bentick Street in the Town Centre. The pilot project will see free connectivity offered to tenants on the estate via a secure private Wi-Fi service running alongside the publicly available service. Tenants will be able to use this network to access a number of pre-approved sites with higher data speeds, less contention and access to services not available on the wider public network (e.g. film streaming etc.).

5.2. NCHT are funding the scheme, the results from which will be used assess the benefits of a wider roll-out across the wider estate.

6. RECOMMENDATIONS

6.1. As set out at the front of the report.