



department for
culture, media
and sport

WEST YORKSHIRE LOCAL BROADBAND PLAN [Redacted Version]

February 2012



The Plan is based on the latest available information at the time of submission in February 2012 and, therefore, the data, assumptions and conclusions may be subject to change

APPLICANT INFORMATION

Project Name:

Reaching Out Across West Yorkshire

Lead organisation

Association of West Yorkshire Authorities / Leeds City Region Partnership

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If the bid is a joint proposal, please enter the names of all participating bodies and specify the co-ordinating authority

Bradford Metropolitan District Council, Calderdale Metropolitan Borough Council, Kirklees Metropolitan Council, Leeds City Council, City of Wakefield Council

Coordinating Authority – Leeds City Council

Start Date of Project: 1/6/2012

End Date of Project: 31/3/2015

SECTION A – PROJECT OVERVIEW

A1 Vision and Strategic Context

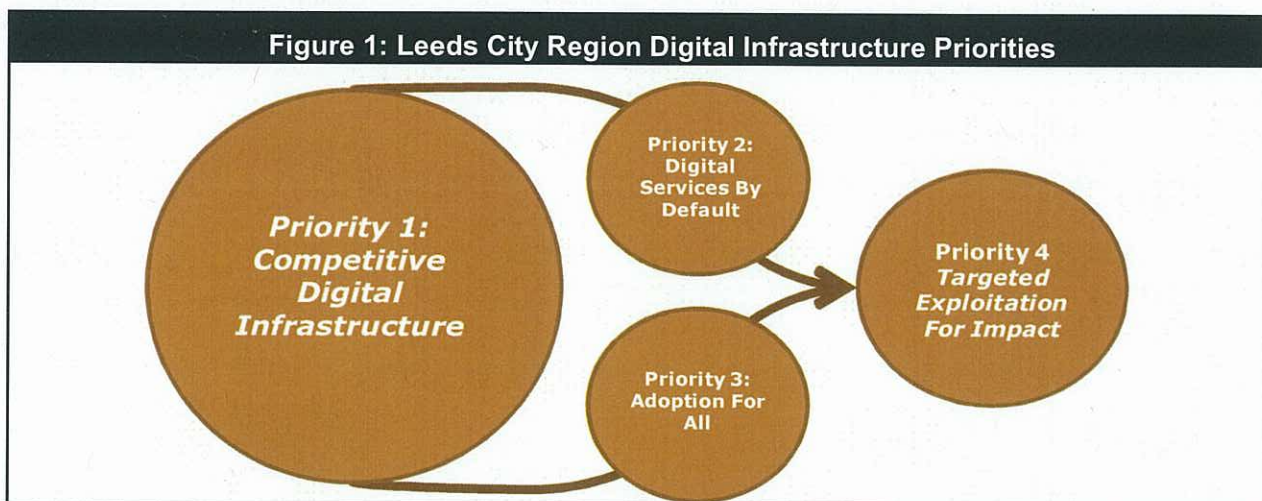
Delivering fast and reliable broadband is vital to the economic performance and social cohesion of West Yorkshire. It has the potential to increase economic growth by supporting innovation, improving productivity and unleashing entrepreneurial talent by making it easier to start and grow a business in the sub region. Alongside the economic arguments, the social case for increasing the coverage of broadband rests on tackling the divide between the haves and have nots, delivering education and health services in a more efficient and responsive manner and extending the opportunities and horizons of those who gain access. In addition, environmental impacts might help contribute to the UK's drive to reduce carbon emissions.

It is for these reasons, that delivering superfast broadband is a priority at a national and local level. BDUK's stated objective is to ensure that all communities and businesses have access to a minimum of 2 Mbps within five years and 30 Mbps within 10 years.

The Leeds City Region's Local Enterprise Partnership's (LEP) long-term vision is for a City Region that is a "world-leading dynamic and sustainable low carbon economy that balances economic growth with a high quality of life for everyone". Digital infrastructure has a major contribution to make to this vision as it can underpin economic competitiveness, extend opportunity and move us away from environmentally damaging patterns of production and activity

Partners across the Leeds City Region have recently develop a long term strategic framework for securing and exploiting the digital infrastructure across the Leeds City Region. Our priorities will focus attention on securing a competitive infrastructure alongside rolling out public services, driving up levels of adoption and securing high levels of business exploitation.

Figure 1: Leeds City Region Digital Infrastructure Priorities



The digital infrastructure element of the plan sets out a long term and wide-ranging set of priorities for the different locations across the City Region and which the LEP will be taking forward. The framework below shows in Red where there are immediate opportunities to pursue our objectives though this plan and the Parallel Super Connected Cities initiative. Our digital infrastructure objectives align with the government objectives for the final third and the investment resource which BDUK has made available to West Yorks.

Figure 2: Leeds City Region Digital Infrastructure Objectives

		Speed / Technology			
		2mb	30mb	100 mb+	+Wireless
Commercial Centres	Regional Cities		Now	2015	2015
	Sub-Regional Centres		Now	2020	2020
Priority Sites	Science Parks			Now	2015
	Business & Industrial Parks		Now	2015	2015
	Major Strategic Sites		Now	2015	2020
	HEIs			Now	2015
	Key Sector Hotspots [TBC]		Now	2015	2020
Core Areas	Town Centres		2015	2020	2025
	Suburban base		2015	2020	2025
	Rural 90%		2015	2025	
	Final 10%	2015	2020	2030	
Future Development	Industrial			Default	
	Residential			Default	

Red – BDUK or Super Connected Cities will address these

Green – Market should address these, although may need some encouragement

Brown – Public Sector partners will have to address these in the future

Grey – Longer term priorities

We recognise that this initiative is the first stage in a long term plan and commitment to super and ultrafast broadband across the City-Region.

Our Plan

West Yorkshire is now well on its way to delivering access to SFB to its households and businesses, and ensuring that everyone can access at least 2 Mbps. The roll out of the two major private sector networks has gathered pace in the last year, and we now believe it is feasible to aim for close to 100% coverage of superfast broadband capability by 2015 by targeting just those areas which we do not expect the private sector to reach. The aims of our plan are:

- to ensure that all areas of West Yorkshire which have not had private sector investment have access to superfast broadband by 2015
- to deliver this at a fair price and through an open network which attracts a wide variety of Internet Service Providers (ISPs)
- to ensure that all households and businesses take up and exploit superfast broadband to its full potential, which will unlock economic growth and boost cohesion
- to ensure that ICT is at the heart of the way public services are delivered in West Yorkshire, which will lead to innovation and significant efficiency savings with further investment.

Strategic Need for Broadband

Economic Growth

West Yorkshire is the economic engine room of the Leeds City Region and the key driver of the knowledge based economy. Its 100,000 businesses account for 71% of the business base for the Leeds City Region, with 18,000 of these in knowledge based industries (75% of the total for LCR). It has a skilled workforce and a diverse range of high value sectors, including the largest centre of financial services outside London. The LEP

has set an ambitious target of achieving annual GVA growth of 2.6% per year by 2030 and creating in the order of 60,000 jobs.

We estimate that the plan set out in this document could generate £60m for the economy of West Yorkshire over 15 years, and create around 800 new jobs¹. Section E3 contains more information on how we estimated these figures and other economic benefits from the plan.

We believe faster broadband has an integral role to play in helping to address each of the four strategic priorities set out in the LEP Plan for the City Region.

Strategic Priority 1: Unlocking the Growth Potential of Business and Enterprise

The LEP wants to **make the LCR a great place for enterprise at all stages of the business life cycle – from start up to growth and innovation**. In 2009, there were 5.6 new businesses for every 1,000 working age people in West Yorkshire compared to 6.6 in Great Britain as a whole. Investment in Superfast Broadband can help us close this gap. Cloud computing can increase the number of business start ups by reducing the need for upfront investment in ICT equipment such as servers, thus reducing barriers to entry.

The LEP Plan also aims to ***“unlock the full potential and accelerate the development of key growth sectors, including life sciences and related industries, the digital and creative sector, low carbon industries, advanced manufacturing and financial and business service”***. These sectors are among the most likely to adopt and exploit superfast broadband since they depend on being able to share and analyse large quantities of data, and to access and supply new markets.

Finally, the Plan sets out its ambition to ***“develop the city region offer and collective capacity for attracting indigenous and inward investment”***. In recent years the LCR has underperformed in terms of attracting inward investment. A recent report by fDi intelligence ranked West Yorkshire behind several other major UK conurbations including Manchester, Birmingham and Newcastle. According to business surveys² the telecommunications infrastructure is one of the most important determinants of FDI. As such, the deployment of a superfast broadband network will help attract investment and improve West Yorkshire’s position.

Strategic Priority Two: Enabling a Flexible, Skilled Workforce

The LEP wants to ***“improve skills and boost employment and productivity in growth sectors”***. West Yorkshire still lags behind the national average in terms of graduate qualifications and has a higher share of people with no qualifications. Faster broadband can help raise skill levels for all age groups. Web based tools such as Virtual Learning Environments can help teachers deliver teaching to a higher standard and raise GCSE attainment levels. Faster speeds also makes it easier and cheaper for residents to access learning opportunities online, and for employers to invest in online training for employees.

Faster broadband also ***increases the flexibility of the workforce*** by making it easier for people to work outside the office. Studies have shown that firms which adopt flexible working practices can raise productivity by as much as 20%³.

¹ This relates just to the economic impact of this plan. The impact of superfast broadband in West Yorkshire overall will be far greater

² Source: Ernst and Young UK Attractiveness Survey, 2011

³ Brad Allenby and Joseph Roitz (2003) “Implementing the Knowledge Economy: The Theory and Practice of Telework” Batten Institute Working Paper, cited in Broadband Services: Economic and Environmental Benefits, American Consumer Institute.

Strategic Priority Three: Facilitating a Low Carbon Economy

The Plan seeks to “**decouple carbon emissions from economic growth within the city region**”. Faster broadband can reduce carbon emissions in a number of ways:

- **Reducing commuting by promoting more flexible working patterns.** Cloud computing and faster upload speeds will mean people can work from home and won't need to commute long distances to the office. This is particularly relevant in West Yorkshire which has a large population living in dispersed towns, many of whom work in Leeds city centre.
- **Smart Grids and Networks:** A smart grid is a digitally enabled grid that gathers, distributes, and acts on information about the behaviour of all participants in order to improve the efficiency, reliability and sustainability of utilities. Similar internet based technology can also be used to regulate traffic flows. Fully operational smart networks may still be some years off for West Yorkshire, however there are a number of projects already in the pipeline, and a fully integrated digital communications network is a pre-requisite for its deployment.

Strategic Priority Four: Creating the Environment for Growth

The LEP plan explicitly recognises digital connectivity as a key factor in realising the city region's growth ambitions. It states that the Partnership will “**Facilitate provision of the digital connectivity demanded by competitive businesses, working to develop an ambitious but deliverable digital infrastructure plan for the city region and working with BDUK and telecoms providers to attract and coordinate investment accordingly.**”

Through these mechanisms, it is estimated that the delivery of this broadband plan could generate £60m in GVA for West Yorkshire (over 15 years) and create up to 800 new jobs. These estimates are based on a bottom-up economic model, which applies evidence of the impact of broadband to business data for those areas included in this plan. More detail of the economic benefits of this plan can be found in Section

Social Benefits

We state above how broadband can help raise skill levels and educational attainment. It can also deliver a number of other social benefits, particularly in rural parts of the sub region. The West Yorkshire Rural Partnership seeks to promote and deliver the regeneration of rural communities in the sub region. It seeks to address the economic, social and environmental issues faced by rural areas. Many of these can be addressed through access to faster broadband.

- **Access to Employment for Excluded Groups:** Superfast Broadband will enable greater levels of home and flexible working and will open up opportunities for people who previously faced barriers to employment, including disabled people and lone parents. Poor access to employment opportunities has also been identified as being a problem in rural parts of the sub region covered in this plan, such as parts of Kirklees.
- **Access to Services:** Increasingly, access to government services and to the full range of social benefits is available through various interactive services, for example cheaper bills and healthcare diagnostics, and public service efficiencies created through increased online service delivery. Again this affects the rural areas of the sub region the most, which make up a large part of the areas covered in this broadband plan.
- **Social and Community Cohesion:** Using broadband and mobile technology to communicate and use the internet enables communication between isolated rural settlements, sharing good practice and overcoming isolation.
- **Equity Benefits:** Data shows that, on average, households in deprived areas are less likely to be able to access superfast broadband. As they have lower income and lower rates of adoption, there is less

incentive for the market to extend to these areas. This means that they miss out on some of the benefits highlighted above. Our plan will ensure that all of these areas will be able to access reliable, high speed broadband.

Transformation of Public Services

Shifting public sector services online as part of the e-government agenda has reduced the costs of transactions with citizens and supported wider access to information and services. "Government anticipates public spending on e-government and digital literacy programmes to yield returns of between 1.1 and 1.5% of GDP increase in 2008-10", according to the UK Online Centre's report 'Benefits of Digital Inclusion: Building the Evidence.

Face-to-face delivery costs are higher in rural areas because more staff are needed to deliver public sector services in sparsely populated rural counties. An increase in service users with access to good quality internet-based services can shift the balance towards more online transactions with subsequent savings for the taxpayer. The plan set out here covers all of the most rural parts of West Yorkshire. It could therefore deliver considerable efficiencies in the delivery of public services.

There are specific examples of how savings can be made:

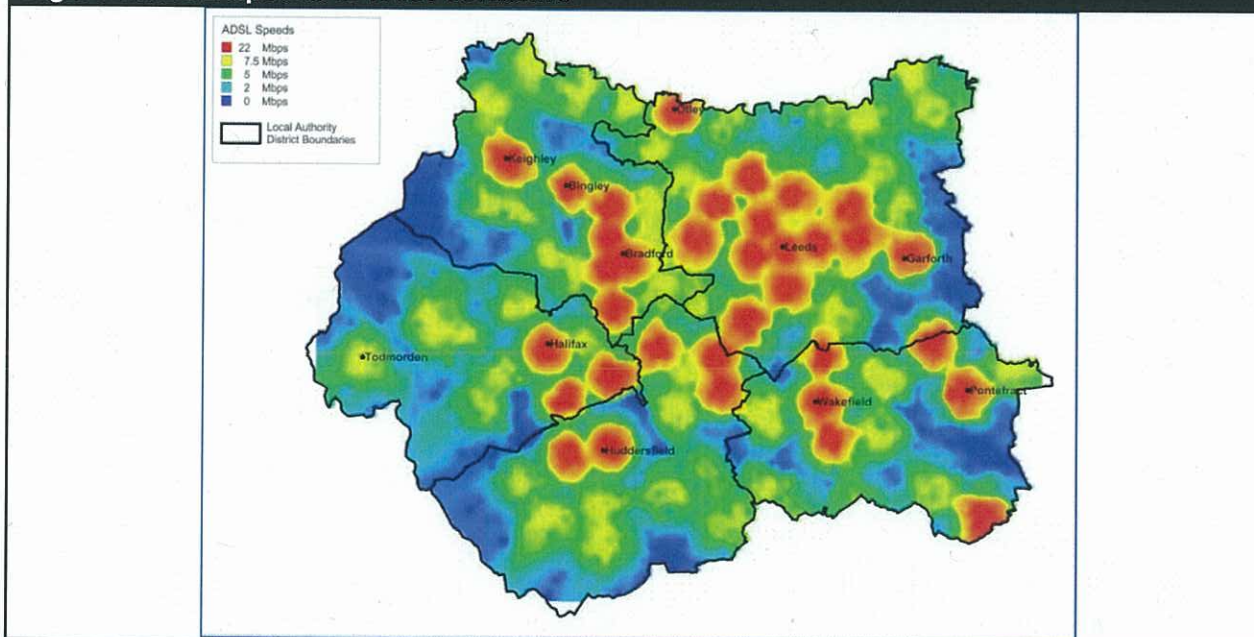
- **Telehealth:** The number of people with long term conditions such as diabetes, chronic obstructive pulmonary disease (COPD) and heart disease is extremely costly for the NHS. Greater use of web based telehealth technology has the potential to generate significant efficiency savings for West Yorkshire based health authorities through reduced admissions.
- **Public Transport:** rolling out superfast broadband right across West Yorks will open up opportunities for better transport information and management of an integrated service to all residents.

A2 Background

Average Speeds in West Yorkshire

The average speed of current broadband in West Yorkshire varies according to which data source or which definition of speeds is used. Data provided by BDUK indicates that the average maximum ADSL speed across all postcodes is around 11Mbps. Point Topic data on the other hand estimates the maximum speed available across all services in an area (not just ADSL) and estimates the average to be 30 Mbps. In both cases, it is a misleading measure since it disguises the large variation across the sub region as a whole (see maps in Figure 3 and Figure 4).

Figure 3: ADSL Speeds in West Yorkshire

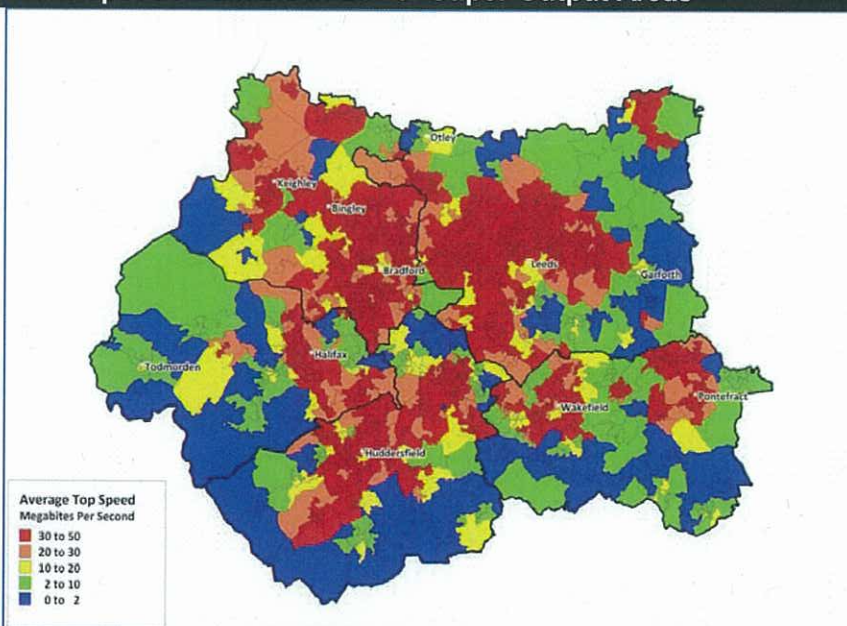


Source: BDUK Map Files

Access to Basic Speeds

Although most areas of West Yorkshire already have good access to broadband, every district within the sub region contains some areas without access to even the most basic speeds. BDUK data indicates that 23,000 premises currently do not have access to 2 Mbps, equivalent to 2% of premises overall. This was based on maximum speeds available through either ADSL or VDSL, and was calculated based on the distance of premises (and the assumed line length) from a postcode to its local cabinet and exchange. Point Topic data estimated the figure to be higher (99,000 premises unable to access 2Mbps, or 9.8% of premises), although this was also based on modelled estimates.

Figure 4: Maximum Speed Available in Lower Super Output Areas



Source: Point Topic

In practice, the actual speeds which premises receive is likely to be lower than the modelled estimates suggest. OFCOM collected data on *actual* download speeds from a large sample of customers using broadband over fixed lines in 2010/11 (OFCOM, 2011). This was based only on ADSL speeds and excluded superfast broadband (VDSL), however it showed that as many as 150,000 premises (15% of the total in West Yorks) could not access 2Mbps over an ADSL line. This is twice as many as the BDUK data suggests (76,000) or 7.6%.

Table 1: Number and Percentage of Premises Not Receiving Download Speeds of 2 Mbps (based on fastest technology available in postcode)

	BDUK		Point Topic		OFCOM	
	Premises	Percentage	Premises	Percentage	Premises	Percentage
Bradford	3,300	2%	4,300	2.0%	23,400	10.8%
Calderdale	2,700	3%	13,000	13.5%	16,100	16.6%
Kirklees	7,300	4%	31,200	16.9%	31,900	17.0%
Leeds	5,200	2%	28,400	7.6%	48,400	14.1%
Wakefield	4,800	3%	22,700	14.9%	30,600	20.0%
West Yorkshire	23,400	2%	99,500	9.8%	150,400	15.1%

Source: BDUK Mapping Files and OFCOM Communications Infrastructure Report 2011
Point Topic Data uses a different base for total number of premises.

The maps in Figure 3 and Figure 4 show that the areas which don't have access to at least 2Mbps are on the periphery of the sub region in rural areas. The table below shows that 36% of premises in the most rural locations in West Yorkshire do not currently have access to basic broadband speeds compared to 6% in Urban areas. However there are still a very large number of premises in these urban areas which do not have access to basic broadband (49,000).

Many of the rural areas on the edge of West Yorkshire are served by exchanges which are located in neighbouring sub regions and so will require careful co-ordination of solutions with neighbouring authorities.

Table 2: Premises Not Receiving Download Speeds of 2 Mbps in Urban/Rural Areas of West Yorks

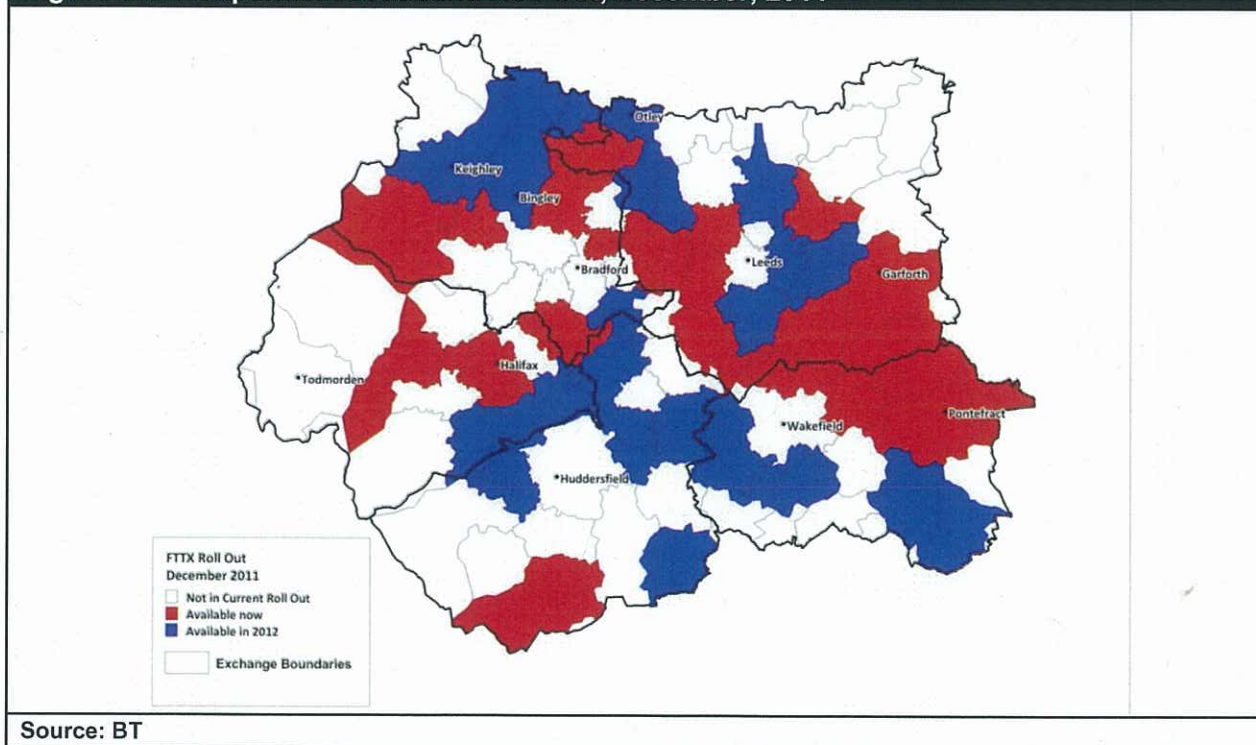
	<i>Number</i>	<i>Proportion of Settlement Type</i>
Urban > 10K	12,700	1.4%
Town and Fringe	6,100	7.9%
Village, Hamlet & Isolated Dwellings	4,700	13.4%
Source: BDUK Map Files		

Coverage of basic broadband speeds has also been mapped against business databases for West Yorkshire. This shows that around 8,000 businesses lack access to basic broadband, although again it should be stressed that this is based on BDUK modelled speeds. We expect the actual number of businesses which cannot access 2Mbps to be significantly higher, although the OFCOM research did not distinguish between business and residential users.

Fibre Roll Out to Date

Of the 82 exchanges in West Yorkshire, BT has already enabled 21 with superfast broadband (FTTX) and has announced a further 23 exchanges to be enabled during 2012. A map showing the locations of these exchanges can be found in Figure 5. Although the majority of premises served by these exchanges will be able to access superfast broadband, it is estimated that around 20% of premises in these areas will only be able to access ADSL as BT is not planning to deploy fibre to every cabinet connected to the exchange and there are expected to be a number of Exchange Only premises which also miss out.

Figure 5: BT Superfast Broadband Roll Out, December, 2011



Source: BT

Virgin Media cable is also widely available in many parts of West Yorkshire. The deployment of cable does not correlate well to BT exchanges or cabinets so coverage is far more patchy (see Figure 6).

Figure 6: Virgin Media Cable Coverage

Source: BDUK

Access to Superfast Broadband

Despite the wide area included in the private sector roll out, not all premises in these locations will be able to access superfast speeds due to their distance from the cabinet/exchange. The table below shows there are 865,000 premises in the roll out area but only 746,000 will be able to access speeds of 30 Mbps and above (equivalent to 75% of premises in West Yorkshire). Again this is based on BDUK's modelled VDSL speed.

The table also shows that the roll out has so far favoured residential locations over commercial areas. Over a quarter of businesses in West Yorkshire (26,000) are not included in the roll out, compared to 13% of premises overall. A further 14,000 businesses are in roll out areas which will not receive speeds of 30 Mbps or more, meaning that 40% of businesses will be unable to access superfast broadband, despite being in areas covered by the BT Infinity and Virgin network plans.

Table 3: Premises and Businesses in Private Sector Roll Out Area by Speed Band

	Premises Overall		Businesses	
	Total	Percentage	Total	Percentage
Not in roll out area	132,000	13%	26,000	26%
Total in roll out area	865,000	87%	74,000	74%
<15 Mbps	51,000	5%	5,000	5%
15-30 Mbps	68,000	7%	9,000	9%
>30 Mbps	746,000	75%	60,000	60%
Total in West Yorkshire	998,000	100%	100,000	100%

Source: BDUK, plus MINT and FAME

Usage

OFCOM data shows that overall take up of broadband in West Yorkshire is 63%. This includes both businesses and households and is lower than the national average of 68%. Point Topic data is generally consistent with the OFCOM data and shows take up among businesses to be higher, at around 65%. Household take up is particularly low in Wakefield, at around 57%. The OFCOM data does not include take up of superfast broadband which is very low in West Yorkshire (around 1% according to Point Topic data).

Table 4: Take up of Broadband in West Yorkshire

	PointTopic		OFCOM
	Household Take Up	Business Take Up	Take up (Businesses & Households)
Bradford	65%	65%	62%
Calderdale	60%	65%	61%
Kirklees	62%	65%	63%

Leeds	61%	64%	64%
Wakefield	57%	63%	62%
West Yorkshire	62%	65%	63%
United Kingdom			68%
Source: Point Topic and OFCOM			

Take up of broadband is particularly low in rural areas of West Yorkshire. In Village, Hamlet and Isolated locations, household and business take up are 47% and 59% respectively; some way below the averages for West Yorkshire as a whole. This is likely to reflect the poor speeds available in these areas which acts as a deterrent for businesses and households to use broadband.

Table 5: Take up of Broadband in Rural and Urban Areas

	<i>Household Take Up</i>	<i>Business Take Up</i>
Urban > 10K	63%	65%
Town and Fringe	49%	60%
Village, Hamlet & Isolated Dwellings	47%	59%
Total West Yorkshire	61%	65%
Source: Point Topic		

Services

There is a competitive market for broadband services in West Yorkshire. Of the 82 exchanges, 72 have been unbundled by one or more competing operators. In addition to BT, AOL, CPW, Bulldog, O2, Sky and Tiscali all have a significant presence in the sub region.

Table 6: Local Loop Unbundling Across West Yorks

<i>ISP</i>	<i>Number of Exchanges</i>
AOL	50
Bulldog	46
CPW	69
Edge Telecom/Trinity	1
Entanet	1
O2 Be Unlimited	58
Pipex	1
Sky	70
Tiscali	44
Source: Samknows	

A3 Local Broadband Context Evidence of Need/Gap Analysis

The maps in Figures 7 and 8 illustrate which areas in West Yorkshire are currently covered by broadband networks:

- **White:** the area is served by no broadband network
- **Grey:** the area is served by one broadband network
- **Black:** the area is served by more than one broadband network

Figure 7: Black, Grey and White Areas for Basic Broadband

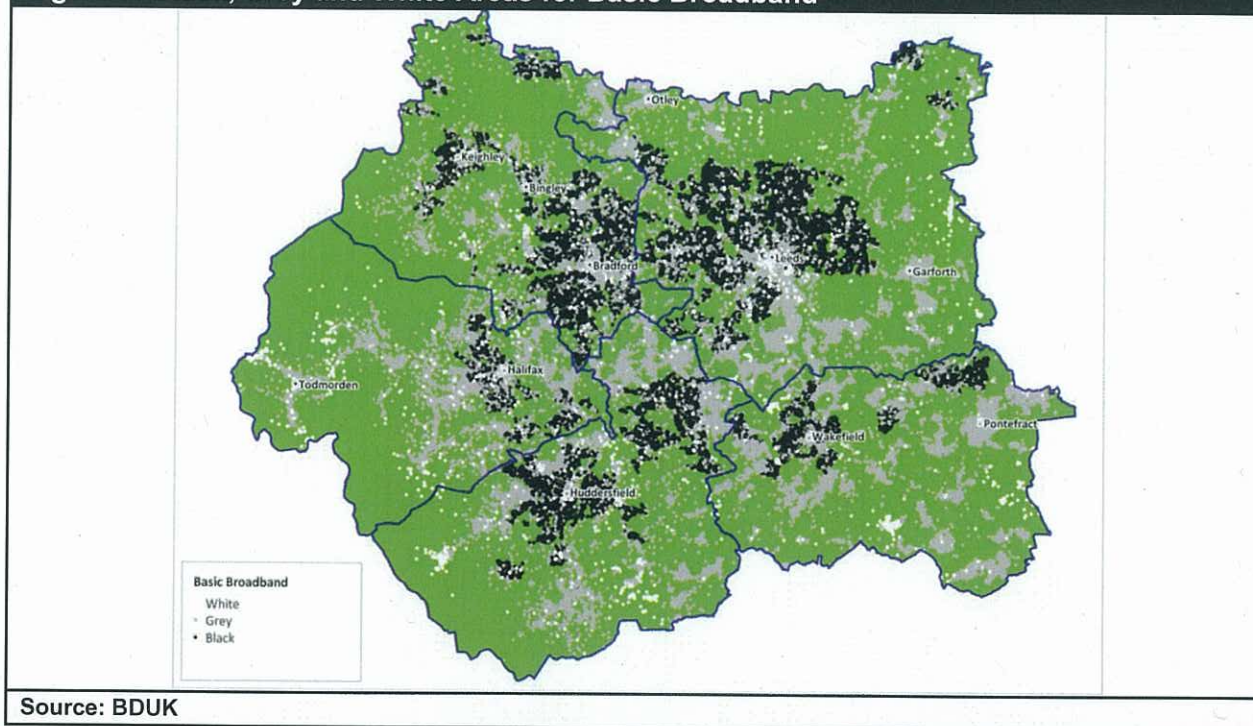
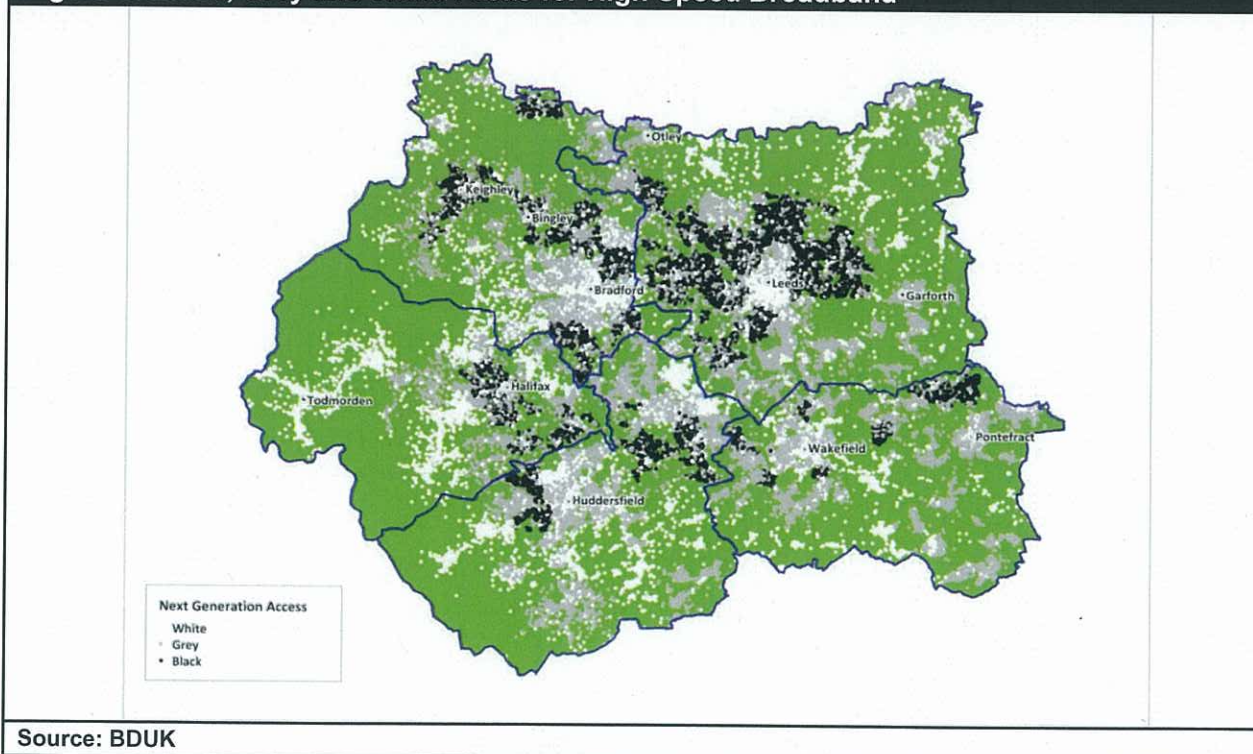


Figure 7 shows basic broadband (minimum speeds of 2 Mbps) coverage while Figure 8 shows the reach of next generation broadband networks (minimum speeds of 15 Mbps). This is in accordance with the guidance issued by BDUK for defining black/grey/white areas required for State Aid purposes. The Local Broadband Plan for West Yorkshire will target only white areas.

Figure 8: Black, Grey and White Areas for High Speed Broadband



The table below shows the number of premises and businesses in each of the different categories. According to

however the number is likely to be higher than this due to the difference in modelled/advertised speeds and those which users actually receive.

There are 163,000 premises in NGA white areas (16% of the total) and a disproportionately large number of businesses (31,000 or 31% of the total business base).

Table 7: Number of Black, White & Grey Premises for Basic & NGA Broadband

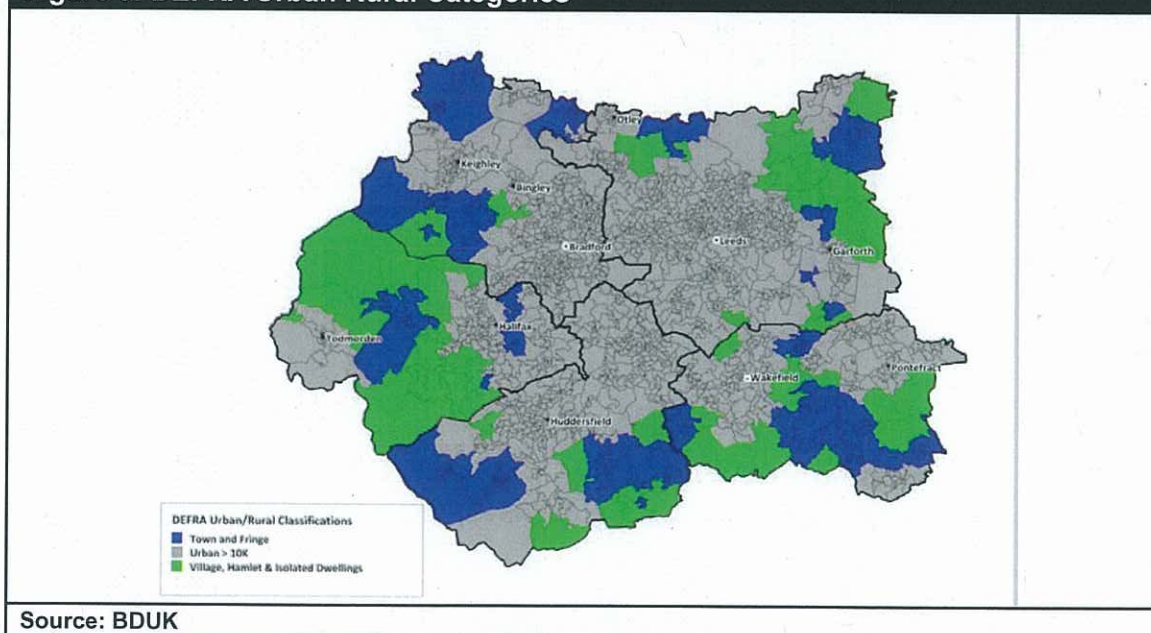
	Basic Broadband				NGA Broadband			
	All Premises		Businesses Only		All Premises		Businesses Only	
	Number	%	Number	%	Number	%	Number	%
Black	550,000	55	36,000	36	337,000	34	22,000	22
Grey	427,000	43	60,000	61	497,000	50	47,000	47
White	20,000	2	3,000	3	163,000	16	31,000	31
Total	997,000	100	99,000	100	997,000	100	100,000	100
Source: BDUK, plus MINT and FAME								

The maps in Figures 5 and 6 show that white areas include some of the most rural areas of West Yorkshire but also many of the smaller towns and the major urban centres. This section highlights the different challenges that these areas face for providing market based solutions for broadband coverage

Topography and Population Density

West Yorkshire is a predominantly urban sub region. According to DEFRA's urban/rural classification, 57% of the land area is classed as urban, 20% as "Town and Fringe", and 23% as "Village, Hamlet and Isolated Dwellings" (the most rural category). This breakdown is shown in Figure 9. Most of the rural areas are on the periphery of the sub region. This includes the northern edge of the Peak District National Park, which falls under a protected landscape designation, and large areas of the South Pennine Moors, which is an area of moorland and hilly terrain (see Figure 10).

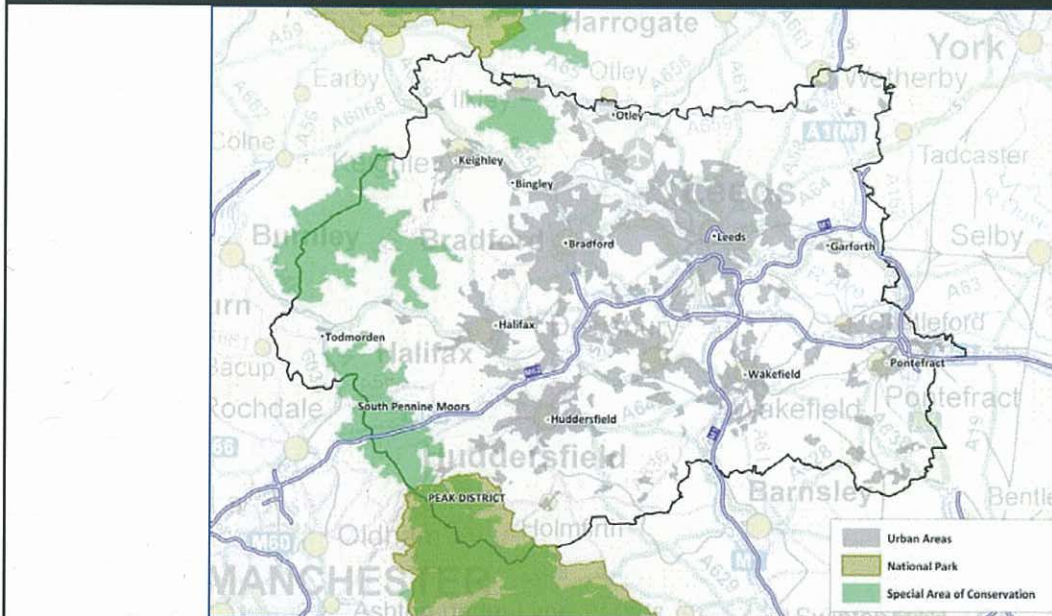
Figure 9: DEFRA Urban Rural Categories



The overall population density of West Yorkshire is 11 people per hectare, well above the national average of 4 people per hectare. However the density decreases to 1.5 people per hectare in the rural areas of the sub

Calderdale, where households and businesses cannot access basic speeds of 2 Mbps.

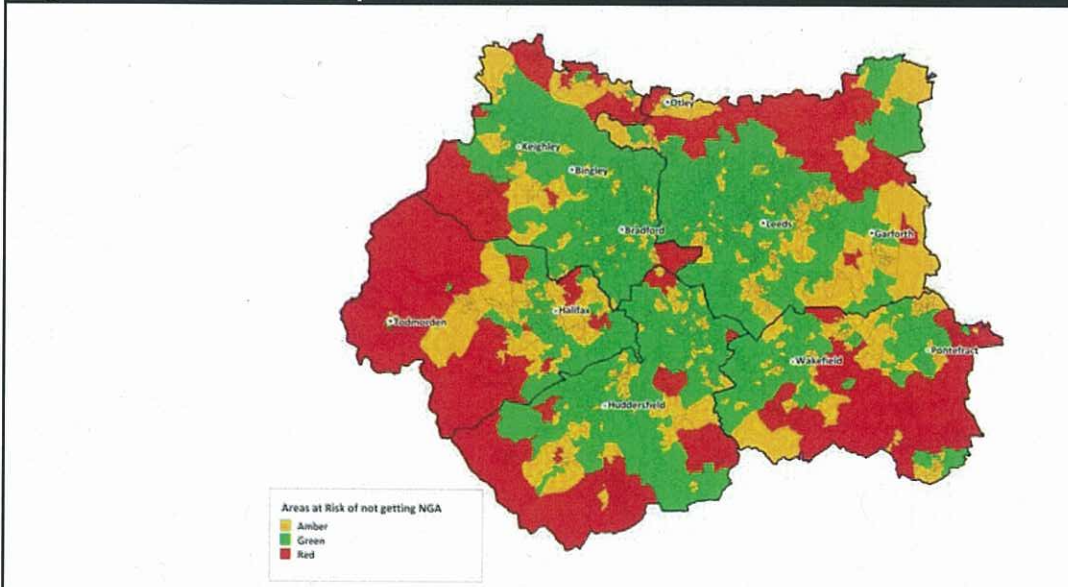
Figure 10: Topography of West Yorkshire



Source: BDUK

It is these same areas where the risk of not receiving NGA access through the private sector is greatest. The exchanges and cabinets in these areas serve fewer properties and have longer telephone lines, meaning the cost per premises passed is much higher and the potential revenues lower. A report on NGA access published by DCLG in 2010 found that 10% of premises in West Yorkshire (100,000) were at high risk of not receiving NGA by 2015, but this rose to 52% of premises for rural areas (see map in Figure 11).

Figure 11: DCLG Risk Map



Source: CLG Risk Assessment

16% of postcodes in rural areas are classed as white for basic broadband. These areas are home to just under 5,000 premises and 600 businesses. This rises to 60% for NGA broadband, meaning 19,000 premises and 2,500

rural businesses will be unable to access NGA broadband without intervention.

Telecoms Infrastructure

Network Operators

BT has 82 telephone exchanges and 3,300 cabinets serving properties in West Yorkshire. BT's coverage extends across the whole sub region, although there are some areas which receive very low internet speeds due to their distance from the nearest cabinet/exchange. These are the white areas which cannot access basic speeds of 2 Mbps identified in Section A2 (see Figure 3). BT's roll out of superfast broadband is described above and shown in Figure 5.

Virgin Media use BT's network to provide ADSL services but also have their own cable network in the sub region. The coverage of this network is shown in Figure 4.

The BDUK baseline, and forecast white areas, is believed to be valid for the purposes of this programme. However, it is noted that:

1. Much of the geography of West Yorkshire can be served by wireless leased line services (as well as wireline leased line services), including those provided by Metronet (UK) Ltd. These are to be welcomed as they provide potentially attractive services. However, they are targeted at larger enterprises and/or backhaul for others rather than the mass (SME and residential) market and therefore probably fall outside of the BDUK definition;
2. Digital Region is a publicly-funded endeavour expected to offer services within the BDUK service definition and reported to be available within the wider Leeds City Region (that includes Barnsley). However, it is not within West Yorkshire and so is not considered in this document;
3. Other telecommunications companies, for example City Fibre Holdings, which were named as companies of interest and believed to be active in the Leeds City Region (that includes York), are not believed to currently provide services within the BDUK definition in West Yorkshire.
4. However, as the BDUK framework is finalised, and with Ofcom as the arbiter of market assessments within the ongoing progress, it is recommended that any market changes over time are monitored, and the market assessment might be repeated with the assistance of BDUK and Ofcom to confirm this position remains valid.

Line Lengths

The table below shows the distribution of line lengths in West Yorkshire (from premises to exchange). The average line in the sub region is 2.3km which is also the UK average, however there are nearly 240,000 premises (24%) with lines over 3km and 36,000 premises with lines over 5km. This decreases the internet speeds available to premises in these areas (see Figure 3). It also increases the cost of deploying fibre and means that exchanges with a high proportion of longer lines are less likely to be enabled by the private sector.

Table 8: Line Lengths West Yorkshire

	<i>Number of Properties</i>	<i>Percentage</i>
less than 1K	187,000	19%
1K-2K	361,000	36%
2-3K	225,000	22%
3-4K	140,000	14%
4-5K	60,000	6%
More than 5K	36,000	4%
Source: BDUK		

Geotypes

The cost of deploying fibre is high in some urban locations, as well as more rural parts of West Yorkshire. A report by Analysys Mason on behalf of the Broadband Stakeholders Group divided areas in to different 'geotypes' according to population density, the number of lines connected to an exchange and the distance of premises to exchanges. This categorisation was used to estimate the cost of deploying fibre in different locations and identify areas at risk of not receiving NGA⁴.

These definitions have been applied to postcode data for West Yorkshire. The data shows the sub region has a high share of properties in some 'high cost' geotypes. These include exchanges serving over 3,000 premises but where the premises are quite dispersed, so the average line length is long (">3K lines (b)" in the table below). Included in this category are some of the smaller towns in West Yorkshire which serve their rural hinterland, such as Todmorden, Sowerby Bridge and Wetherby, which are yet to be included in the roll out of BT Infinity.

Table 9: Geotypes in West Yorkshire

<i>Geotype</i>	<i>Ave. cost per premises</i>	<i>Premises in WY</i>	<i>Percentage of Premises in WY</i>	<i>Percentage of premises in UK</i>
<1k lines (b)	1750	2,400	0%	3%
>3K lines (b)	1100	136,500	14%	12%
<1k lines (a)	920	300	0%	2%
>20K lines (b)	700	180,900	18%	6%
>1k lines (b)	650	12,600	1%	4%
>10K lines (b)	550	126,800	13%	6%
>3K lines (a)	450	47,800	5%	10%
>500K pop	410	163,700	16%	12%
>1k lines (a)	400	4,300	0%	4%
>20K lines (a)	400	156,600	16%	10%
>10K lines (a)	380	177,700	18%	16%
Source: Broadband Stakeholders Group by Analysys Mason				
Ranked in order of average cost per premise				
Category (a) indicates short average line length, while category (b) refers to long average line length				

West Yorkshire also has a high share of premises in exchange areas in larger towns where properties are dispersed (">20K lines (b)"). This geotype was ranked fourth highest cost per premise according to the Analysys Mason report, and includes the centres of some of the largest towns in West Yorkshire, including Huddersfield and Wakefield. Again, these towns have so far not been included in the announcements of BT, although some areas are served by Virgin Media.

Public Sector Networks

Representatives from Property, Highways, ICT and PSN have been contacted and are currently compiling summary details of the assets that they believe may be offered to bidders. Likewise a view of existing and planned telecommunications service contracts will be provided to bidders. Both these items are in preparation in time for use in the procurement.

In both cases the details are awaited but experience suggests that qualified public sector assets may be limited and will be subject to survey and contract in all cases.

Socio-Economic Need

Priority Sectors

The analysis above has shown that there are 31,000 businesses in 'NGA white' postcodes, equivalent to 31% of businesses in West Yorkshire. This is a high proportion given the extent of existing and planned coverage in the sub region, and can be attributed to the fact that many of the urban centres have so far not been included in the roll out.

Among the businesses which will currently miss out on NGA broadband, there are significant numbers in some of West Yorkshire's priority sectors. These are the highly skilled, high value sectors which will be an important source of growth for the sub region and will be key to supporting the transition to a private sector based economy. Many of the sectors are also the most likely to adopt and exploit NGA broadband since they depend on being able to share and analyse large quantities of data, and increasingly to access and supply new markets. The ability to upload large quantities of data will be particularly important for creative, cultural and digital industries which is important for the design, development and distribution of new content. The Life Sciences sector requires high bandwidth to support the R&D process, while manufacturing sectors use broadband for design and development as well as implementing digital supply chain management processes. All sectors will benefit from cloud computing which has the potential to increase the rates of start ups by reducing fixed IT costs and therefore reducing barriers to entry.

The table below shows the number of businesses in priority sectors which are in white areas. In some sectors, such as Financial Services, as many as 38% of businesses will currently miss out on NGA without intervention. This has the potential to hinder the development of these important sectors.

Table 10: Priority Sectors in West Yorkshire in White Areas by Postcode

	<i>In White Postcodes</i>	<i>Total</i>	<i>% in White Postcodes</i>
Creative and Cultural	1,900	5,900	33%
Life Science	100	200	38%
Low Carbon	600	2,100	30%
Digital	1,300	4,100	31%
Financial	700	1,800	38%
Manufacture	2,400	7,300	33%

Source: BDUK. MINT and FAME database

Deprivation

High speed broadband will also help households to access jobs and services, which will help alleviate deprivation in some areas of West Yorkshire. Analysis of the 2010 Index of Multiple Deprivation shows that 23% of the premises in white areas are in LSOAs which are in the 20% most deprived LSOAs in the country. This compares to only 13% in the least deprived parts of the sub region. There is therefore a social as well as economic case for extending access to these areas; to ensure they enjoy the same opportunities as more affluent areas. However we also recognise that superfast broadband is not a panacea for deprivation, and

many people living in these areas are more likely to use mobile rather than fixed line telecommunications.

A4 Scope of Project

Objectives

The long-term objective of the Leeds City Region partners is to secure 100mb synchronous broadband for all our residents and businesses. A Super-Connected Cities (SCC) bid has been developed to advance other strands of the LBP strategy, and will set this ultra-speed standard in the SCC Priority Zone as a prelude to further roll-out elsewhere in the city region. We recognise this is an ambitious agenda which will require long-term effort. We expect the market to contribute the lion-share of investment towards these goals and believe that we can accelerate the investment plans of the market by sharing insights into areas of need and opportunity, aligning our planning and policy making around a commitment to these goals and taking advantage of commercial partnership arrangements which may leverage additional investment into the area.

The objective of this BDUK initiative is to nationally secure access to superfast broadband for 90% of UK premises by 2015 and for the remaining 10% to be guaranteed a minimum of 2mb. **According to BDUK data, 86% of West Yorks' premises are categorised as having access to Superfast Broadband and just 2% do not have access to Basic Broadband.** However in reality the picture is more complex and subtle, and requires us to look behind the headline data.

Project Plan

The current picture of broadband need is both complex and fluid. We have developed a series of categories of premises in need to help clarify the challenge ahead.

- **Pure White:** properties served by BT Cabinets which do not feature in their current roll-out plans and where there is no Virgin Media coverage planned. This category can be broken down into two groups based on their likelihood of market investment plans being further expanded:
 1. Properties with a higher likelihood of being included in any expanded next phase of market roll-out or through our Super-Connected Cities bid. This has been based partly on our engagement with the market.
 2. Properties not expected to be included in any future roll-out plan or in the super-connected cities bid⁵
- **Part White:** properties served by BT Cabinets which do not feature on current roll-out plans but where there are some premises with access to Virgin Media. These properties are potentially more expensive to tackle due to the more limited number of white premises which can be supported. There are a small number of properties in this category which are served by Black or Grey cabinets which due to their line length do not benefit from the minimum speed required by BDUK to be deemed Grey (ie 15Mb/s).
- **Exchange Only:** premises which are not served by BT Cabinets as they are located very close to exchanges and which do not have access to Virgin Media services.
- **Infill:** premises served by Black and Grey BT cabinets but which due to limitations in the actual roll-out in their area are not expected to be able to access the service.
- **Black-Grey Sub-Target:** premises in Black & Grey areas which do not currently get the targets speeds of 2Mb/s and 30Mb/s (due, we believe, among other things to long line length).

Table 12: Properties Currently In Need in West Yorks

	<i>Not getting 2 Mbps</i>	<i>Not getting 30 Mbps</i>	<i>Total</i>
Pure White	11,300	70,200	81,500
Part White	8,200	50,700	58,900
EO ⁶	400	22,600	23,000
Black-Grey Sub-Target ⁷	2,500	84,600	87,200
Infill ⁸	n/a	58,400	58,400
Grand Total	22,437	228,173	250,610
Source: BDUK Mapping Files			

As well as looking at all properties we are able to estimate the number of businesses in each of these categories of need.

Table 13: Businesses Currently In Need in West Yorks

	<i>Not getting 2 Mbps</i>	<i>Not getting 30 Mbps</i>	<i>Total</i>
Pure White	1,600	11,100	12,700
Part White	100	4,400	4,500
EO	100	4,400	4,500
Black Grey Sub-Target	197	9,200	9,397
Infill	n/a	6,700	6,700
Grand Total	1,997	29,100	31,097
Source: BDUK Mapping Files plus MINT & FAME			

Our long term objective is to address all the properties in need list above however we are committed to:

- **Investing the resource quickly in line with State Aid obligations:** this effectively rules out investing in Infill areas (as these are deemed to be Grey or Black) and the Black-Grey Sub-Target category.
- **Making a demonstrable difference:** which militates against tackling the pepper-pot challenge of Exchange Only.
- **Focusing on areas least likely to be addressed by the market:** which points us towards looking initially at Pure White areas. (Part White premises are close to areas already served by Virgin Media, we have concluded that they are more likely to be addressed by the market in the medium term than Pure White Premises.)
- **A responsive programme:** which adapts to align with the evolving roll-out of the market providers.
- **An affordable programme:** which leads to serious interest from the market and is the basis for a competitive negotiation with potential suppliers and investors.

Preferred Plan

Using the BDUK Cost Model we have estimated the cost of tackling Pure and Part White PCs in a number of different options. Following discussions with West Yorkshire leaders through AWYA, we have arrived at a preferred plan which we believe is commercially viable over a [REDACTED] and affordable given the funding constraints for the deployment of the network.

The preferred plan has a total capital cost of [REDACTED]. Local authority partners have already committed to matching the £6.34m allocation from BDUK, and a minimum of [REDACTED] will be obtained from private sector

partners.

The process for identifying cabinets to be included in our preferred plan is as follows:

- Only pure white PCPs are included, **but with the following types of PCP excluded:**
- PCPs which are included in the super-connected cities bid
- PCPs which we believe the market is most likely to extend its plans to in the next 12/18 months (see below)
- PCPs with the most challenging cost and revenue profile

We estimate the plan would provide access to SFB for an additional 59,000 premises, and would achieve 93% coverage across West Yorkshire (including the area covered by the super-connected cities bid and the future private sector roll out).

Table 14: Premises and Businesses Covered in Preferred Plan

	Premises	Businesses	CapEx
Bradford	400	100	■
Calderdale	27,500	2,900	■
Kirklees	13,200	2,000	■
Leeds	7,100	1,100	■
Wakefield	10,200	1,200	■
Over border cabinets	700	100	■
Total	59,100	7,300	■

We have arrived at these figures using the BDUK cost model but have modified a couple of the base BDUK assumptions:

[REDACTED]

[REDACTED]

The Base SFB Adoption rate has been left at the default 25% although where evidence of latent demand justifies it, a higher figure could be deployed. Commercial investors appear to be assuming adoption maybe below 25%.

Alternative Plan

[REDACTED]

Under this option, we estimate the plan would provide access to SFB for an additional 87,000 premises, and would achieve 96% coverage across West Yorkshire (including the area covered by the super connected cities bid). However, after detailed analysis of the BDUK cost model we have reached the conclusion that attracting this level of private sector investment would be particularly challenging.

Table 15: Premises and Business Covered in Alternative Plan

	Premises	Businesses	CapEx
Bradford	6,700	600	■
Calderdale	28,800	3,000	■
Kirklees	25,700	3,500	■
Leeds	12,800	2,000	■
Wakefield	12,000	1,500	■
Over border cabinets	700	100	■
Total	86,700	10,700	■

We have therefore agreed on our preferred plan as a minimum. However, as we progress our procurement and State Aid clearance, we will adapt our plan to eat into any residual premises not addressed by any expansion in current roll-out plans. And we will invest any additional resource we can secure in progressively working through the remaining Pure and Part White PCPs.

Predicting Future Coverage

Our preferred plan is to enable cabinets which we expect to be Pure White in 12/18 months time (when our project is likely to commence the construction phase). This strips out a number of PCPs which are currently classified as Pure White, but which have a high chance of being announced for an upgrade in the next year or so. It also strips out those PCPs included in our Super-Connected Cities bid area.

The previous four announcements by BT show that the roll out of NGA networks is continually gathering pace, with over 200,000 premises included since April 2011. Our preferred plan anticipates the private sector roll out continuing in certain areas of the sub-region, and focuses only on those areas which will miss out.

Table 16: Number of Premises in BT Roll Out since April 2011

	Apr-11	Jul-11	Sep-11	Dec-11
Number of premises in BT roll out area	435,000	499,000	528,000	663,000

The exchanges which we believe the market will announce in the next 12-18 months are

They therefore have a higher chance of being included in the market roll out than rural exchanges serving a smaller number of premises. This is not definite, however, and we will reassess the state of play in the market before we commit to the investment plan. More information on how we selected these areas is included in Appendix 1.

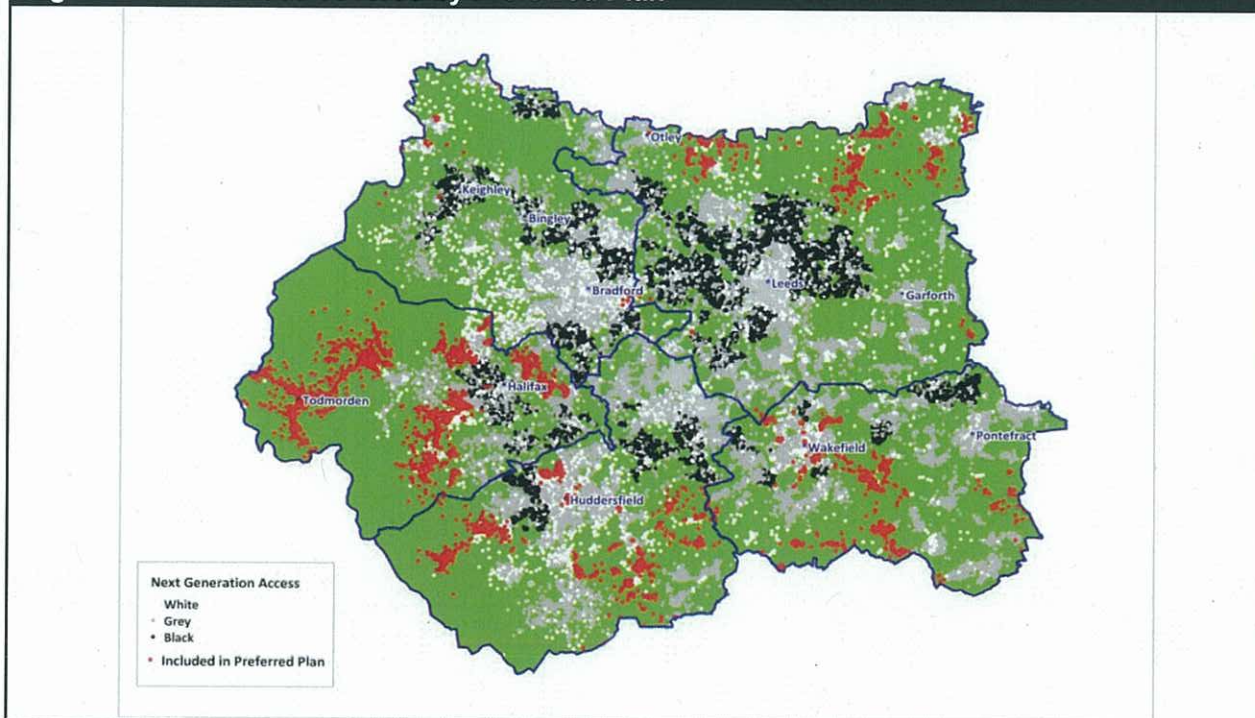
The Super-Connected Cities area also covers central parts of Bradford and Leeds so there is a great deal of overlap between the two areas (see Figure 12). Our preferred plan excludes all cabinets which fall within either of these areas and therefore am assuming as part of this preferred plan that the SCC submission will be successful.

Figure 12: Locations of Exchanges Predicted to be Announced in Market Roll Out

Figure 13 shows the postcodes covered by the preferred plan. The postcodes in Leeds, Bradford and Batley

and in the Super Connected Cities area are now mostly grey or black since we are assuming that either the private sector will have announced further roll-out of upgrades or the Super Connected Cities programme will have enabled them.

Figure 13: Postcodes covered by Preferred Plan



Service Levels and Phasing

Our prioritisation of areas and service levels will be established during competitive dialogue, and will be based upon a number of criteria:

- Prioritising areas which are home to significant clusters of businesses, especially those in the LEP's priority sectors (see Table 10). We will ensure that business parks which are home to clusters of these businesses have access to the highest possible service.
- Balance between rural and urban areas in order to secure the buy in of local communities.
- Prioritising public sector locations, such as hospitals, schools and public sector offices, where there is an identified opportunity to generate savings through online delivery of services, again ensuring that key sites have access to very high speeds.
- Prioritising areas experiencing deprivation, or where there are perceived to be poor access to services such as public transport

Each local authority will determine their own priority areas and draw up an implementation plan, drawing upon their own local knowledge and engagement with the local stakeholders, including local communities and businesses. These implementation plans will form the basis of the final agreement on service levels and phasing with the telecoms partner.

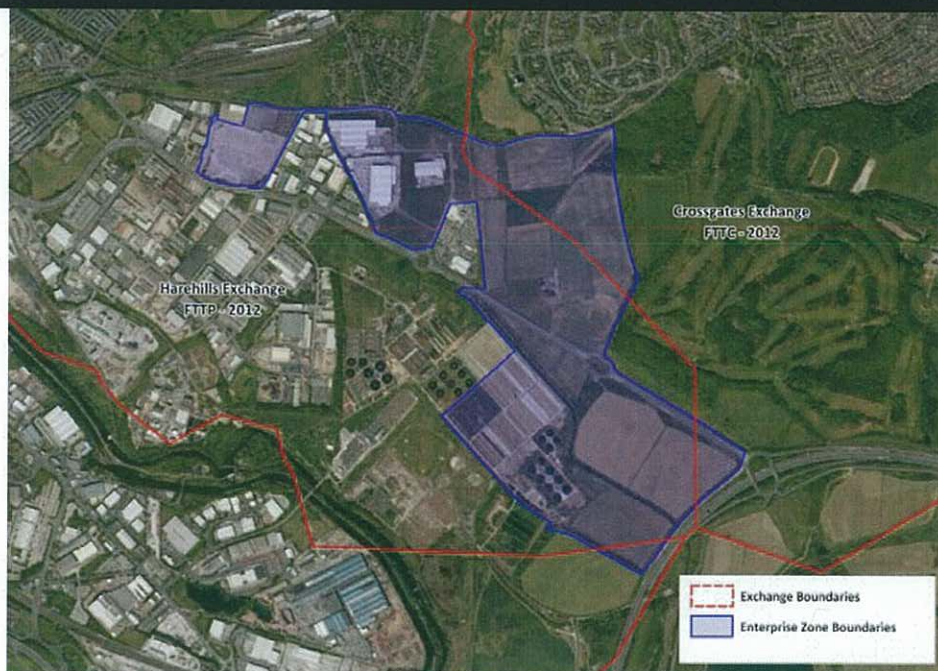
Priority Locations

The Leeds City Region's Enterprise Zone is located to the east of the city centre in the Aire Valley Urban Eco Settlement. The location was chosen as it demonstrated the potential to deliver significant economic growth and access to job opportunities across a wide area. Most of the allocated site is within the Harehills exchange area, although the eastern edge crosses over in to an area served by Crossgates Exchange. We have included the area in our Super Connected Cities bid as it is a key priority for the city region. We will also work closely with the market to encourage them to ensure that high speed broadband capability will be accessible in the EZ

These premises are therefore not included in our preferred plan, [REDACTED]

[REDACTED] There are a number of other strategic business locations in West Yorkshire, which will be included as priority areas in the relevant authority's implementation plan.

Figure 14: Map of Enterprise Zone



Community Hubs

We see community hubs as having a key role to play in those rural areas which won't receive superfast speeds due to the distance of the line (even after upgrade), or where the local community have identified a need or desire for faster speeds. We will explore the potential for public sector locations to act as these hubs, especially in schools and public sector locations and community facilities. We will explore the possibility of obtaining funding for community hubs through the Rural Community Broadband Fund.

SECTION B – CUSTOMER AND COMMUNITY ENGAGEMENT

B1 Demand Stimulation

This Broadband Plan has been developed and will be delivered within the scope of the Leeds City Region Digital Infrastructure Plan which includes a clear aspiration that “the Leeds City Region will encourage all its businesses and residents to connect to superfast and ultra-fast broadband and engage with the ever expanding range of opportunities for economic growth and personal development”.

To meet this aim, partners in West Yorkshire aspire to develop a comprehensive programme of demand stimulation activities that will deliver strong rates of take up amongst business, public sector and residential users to ensure that the plan delivers significant social and economic benefits.

While adoption levels for current generation broadband are high overall, there remain important groups of end users that are not signing up. As faster broadband services are rolled out, there is scope for a second digital divide to emerge and for some groups to be left even further behind. The development of a programme of adoption activities targeted towards groups currently exhibiting lower levels of adoption will therefore be an essential part of the delivery of the West Yorkshire broadband plan. Activities within this programme will focus around groups of business, residential and public sector users that are best placed to generate the most benefit through adoption and exploitation of current and next generation broadband.

Business Users

Our approach is based on our understanding of the drivers of adoption amongst business users. The central factor being that businesses will adopt broadband where they see a real commercial benefit to their organisation and will invest in higher speed connections where the case is clear. Our planned approach sets out to firstly seek out the businesses for which adoption of next generation broadband will deliver a clear commercial benefit, to clearly articulate the nature and scale of the benefits and to make provision for the technical and practical assistance that may be required for businesses to realise them.

Targeting Support to High Impact Businesses

Survey research underpinning the ICT benchmarking study for the Yorkshire and Humber region¹⁰ explored the type of businesses that tend to have lower levels of adoption. Although the geographical scope of this study extended beyond West Yorkshire, the following characteristics about adoption and exploitation of ICT and broadband were common across all geographies:

- **Levels of adoption are lowest amongst very small businesses:** 26% of businesses employing fewer than 10 people were classified as non-adopters and a further 26% as having only basic levels of adoption.
- **Levels of exploitation are low in medium sized businesses:** around a third of businesses employing 11 to 250 people had just basic levels of ICT adoption.

These findings suggest that there is a case for support focused on both basic levels of broadband adoption as well as measures focused on exploitation to ensure that businesses extract maximum value and benefit from broadband services. The tendency for smaller businesses to exhibit lower levels of adoption and exploitation suggests that Interventions targeted towards SMEs will generate the largest net additional impacts.

The ICT benchmarking study also highlighted significant variation in levels of adoption and exploitation vary within and between sectors. In addition, the propensity for businesses to benefit from broadband services and the type of benefits they could realise varies depending on both the size of the business and the sector in

which they trade.

To ensure that adoption activities create maximum impact, we propose to prioritise adoption interventions towards businesses in the two groups which can yield the largest benefits:

- **Essential Adopters:** Businesses for which ICT and broadband are increasingly essential as a core requirement for market entry. Many of these businesses will already be well served by current generation broadband, but are likely to require NGA to remain competitive. There are some [To Follow] essential adopters in West Yorkshire. These are distributed amongst businesses of [To Follow] size and focused around [To Follow] sectors.
- **Competitive Edgers.** Businesses in sectors where access to faster broadband and the ICT services which run on it can generate real competitive advantage. There are [To Follow] competitive edgers in West Yorkshire, focused on the following sectors [To Follow]

The business adoption agenda will also reach out to those businesses that are currently adequately served by their current levels of adoption. Although these businesses are currently performing well in terms of adoptive propensity, this group will need to ensure that they do not fall behind and are ready and able to sign up to faster speeds as a when they become available. These businesses will not be as highly prioritised as essential adopters and competitive edgers.

Offering an Appropriate Package of Support

Businesses go through a series of stages on the way to adopting a new technology. These stages can be summarised as:

1. Basic awareness of the existence of a new technology or application
2. An appreciation of the potential for the technology of application to change or have benefits for their business
3. An understanding of the options for and value of the additional investment required to implement the technology
4. Procuring a solution and implementing the necessary business changes
5. Ongoing review of whether returns from the investment are being maximised and exploration of new ways to get more from the investment.

For some businesses, awareness raising activities may be all that is required to start them off on the process of adopting and exploiting a technology without assistance. However, we anticipate that there will be businesses that require additional adoption or exploitation assistance. The package of support required to guide a business through these stages will differ from one business to the next and will need to be appropriate to:

- the stage of the adoption process they have reached
- the scope of the business change required to adopt a particular technology or application
- the baseline level of adoption and exploitation within the firm.

The framework below outlines the broad support areas appropriate to each stage of the adoption process and highlights examples of support types that might be required

Table 17: The Support Menu

	1. Basic Awareness of Technology	2. Appreciate Potential	3. Value and Make the case	4. Invest and Procure	5. Implementing and Maximising Returns
Awareness raising of technology and potential applications (e.g. events, direct marketing, workshops)					
Assistance to visualise benefits in the context of their own businesses (e.g. events and workshops, one to one support)					
Assistance planning and managing the change process within the business (e.g. mentoring, one to one support)					
Technical assistance with integrating technology (e.g. online or telephone support)					

Our Proposed Programme

We have developed a programme of activities around this framework informed by intelligence on good practice in demand stimulation and adoption activities. The principles underpinning our proposed programme of support are:

- outreach activities and proactive marketing and PR are essential.
- a clear and compelling case needs to be made.
- the advice must be provided from an independent and neutral source.
- we must encourage businesses to think big in terms of how they will use broadband.
- the programme must be linked to wider business support activities and delivery.
- the support must adequately address skills gaps.

The demand stimulation project will provide support to assist SMEs in West Yorkshire to connect to and exploit the commercial benefits of the broadband network. The programme of support offers assistance of varying degrees of depth to ensure that the offer is flexible enough to meet the needs of all clients. **We are not seeking any funding from BDUK for these activities** – we expect to resource this activity using funds from Local Authority Partners and ERDF. We will tailor the programme with input from the private sector to ensure that it is responsive to their needs.

Table 18: Overview of Business Support and Demand Stimulation Programme Activities

Package	Focus and Description
Level 1: Initial Engagement Events 4,200 SMEs	• A series of initial engagement events around West Yorkshire will highlight the potential benefits of superfast broadband connections. • Help to identify SMEs that require further one-to-one contact or more intensive ICT diagnostic reviews offered by the project (Levels 2 and 3). • Complement the activities of internet service providers (ISP) which are expected to work with SMEs seeking superfast broadband internet services once the network is available in an area.
Level 2: One to One Advice 1,500 SMEs	• 3-4 hours of one-to-one, onsite contact time with the service following the initial round of workshops. • Site visits will assist SMEs to establish relationships with ISPs, deal with any immediate issues in connecting to the network and signpost businesses to other support services where a need is identified.
Level 3: ICT Diagnostic Review 1,050 SMEs	• Full assessment of SME's connection requirements, assess how ICT is being used in the business and broker the business to the network provider where necessary. Culminates in businesses agreeing an action plan with the service. • Also used to establish whether the SME should go on to receive further support from the service provider in the form of an ICT project.
Level 4: ICT Project Support and Mentoring 210 SMEs	• 2 days support package • Further assistance and one to one mentoring and advice to implement the recommendations from the diagnostic review • Focused on development, implementation and management of digital commercial strategies for the business capitalising on the availability of a superfast broadband connection
Level 5: Seminars and Group Workshops 4,200 SMEs	• Enabling representatives of eligible SMEs to share best practice, showcase new products and be introduced to processes which have the potential enhance business growth and which require high speed broadband connections. • Core topics could include the use of digital social media in marketing, supply chain management and the benefits of cloud computing applications.
Level 6: Brokerage and Follow Up 1,050 SMEs	• signpost SMEs to other business support services where these are not provided directly by the contractor or where work with an SME has identified a need for other types of support. • It is assumed that all businesses undertaking diagnostics will receive specific brokerage advice as part of the service • All clients that go thorough the diagnostic process will also be provided with up to an hour of follow up contact time with an adviser.
Web Based Remote Support 4,200 SMEs	• Support and Service Website • Remote advice to SMEs offering practical support as digital strategies are implemented

We expect be able to engage with 4,200 SMEs between 2012 and 2015. This would equate to a 15% penetration rate in the region's ERDF eligible SMEs. Our initial cost modelling exercise indicates that the total cost to deliver this programme of support will be [REDACTED]. The total costs by support type are provided in Table 19.

Table 19: Anticipated Costs of Business Support and Demand Stimulation Activities (£000s)

	Q4 2012	2013	2014	Q1 & 2 2015	Totals
Level 1 Events					
Level 2 One-2-One					
Level 3 Diagnostic					
Level 4 Project Review					
Level 5 Workshops					
Level 6 Follow Up					
Brokerage					
On Line					
Remote					
Total					
Overheads					
Marketing					
Total					

2. Residential Users

Partners will build on existing interventions aimed at driving up adoption of current and next generation broadband access by domestic users. As for interventions focused on business users, support and awareness raising activity will be targeted towards groups where adoption tends to be lowest and where the potential to benefit is greatest and most immediate.

This activity has already begun across the districts. For example, within Calderdale work is ongoing to promote the Access to Services (channel shift programme) and Race Online /Go Online. The latter is in conjunction with libraries in their UK online centre role. Calderdale Adult Learning have run additional beginners sessions and some external partners (Mecca bingo, Lloyds Bank) have progressed online beginner events.

In 2010, Kirklees Council initiated a rural broadband survey and demand registration scheme in Denby Dale in conjunction with Rutland Telecom. Along with a series of public meetings, the public was encouraged to register their interest in and demand for sub loop unbundling solutions across several rural villages with up to 7,000 properties.

Kirklees is also engaged in broadband demand stimulation programmes with the Stocksmoor Village Association, Kirkburton Parish Council and the Colne Valley Area Committee. Usage of the internet tends to be least widespread amongst the elderly and people in lower income groups as well as amongst people with disabilities. Nevertheless, the potential gains from adopting internet use at home are more immediate and tangible for some groups than others. For example, unemployed people may be able to secure immediate benefit by searching and applying for jobs online. Conversely, the benefits for elderly people may be less immediately evident, although there are likely to be positive impacts on health and well-being associated with independence that some elderly (particularly mobility impaired) people can realise via digital technology (for example by shopping and paying bills online or accessing tele-health services).

We have identified six high priority residential adoption groups on which to focus adoption activities. These are:

- Lower income groups
- Unemployed people
- Young families
- Learners

- Unwell or disabled
- Elderly

As for business adoption interventions, our starting point for the development of individual projects will be an assessment of the current landscape of support across the West Yorkshire boroughs. We will then develop targeted interventions to fill geographical or thematic gaps in existing provision as appropriate.

This demand stimulation activity will build on the work and experience of digital inclusion within the West Yorkshire authorities

Leeds is a full partner in Race Online 2012 and digital inclusion is at the forefront of outreach activities taking place across the city. Recent programmes include Go On Leeds 2011 which include the voluntary, community and commercial sector working together to promote the benefits of being on-line.

Leeds is working to close the gap by partnering with BT and Citizens On-line in a 3 year digital inclusion programme within BT's National Programme Get IT Together. This project will embed a community digital champion into Leeds to support digital inclusion and the use of technology amongst hard to reach groups with low employment prospects, education and skills.

Under the Get IT Together programme this project will build on the work which has begun with hard to reach groups who experience specific access difficulties in using ICT. The work already undertaken by Leeds City Council and in the extended community will ensure that the Get IT Together programme has access to a comprehensive network of stakeholders and partners.

In addition to these activities Leeds has joined the community capacity builders programme (CCB) funded by UK-Online centres which seeks to increase the capacity of community organisations to provide support or training to residents within their communities.

3. Public Sector Organisations

The third pillar of our adoption activities will centre on assisting with public sector plans to integrate digital technology into service provision. Activities within the residential adoption theme will ensure that residents have the skills and confidence necessary to take up services being offered online while activities within this theme will focus on supporting and encouraging service providers to offer an increasing number and range of services online.

As part of the Leeds DIP, West Yorkshire districts are committed to seeking to secure world-class exemplar provision of digital services. This includes, for all authorities, the full range of transaction based services (e.g. paying bills and booking appointments online, submitting planning applications etc) but also aspirations for more complex services such as:

- **Tele-health services:** West Yorkshire is in a strong position to further extend development and use of tele- health and tele-medicine technologies as a result of a strong track record of activity by Airedale NHS trust and other activity in Leeds. Partners are working towards joint commitment to interventions to help extend the provision and critically uptake of telemedicine services across the area.
- **Online interactive education and learning:** digital and online learning tools have become increasingly integrated into the delivery of the curriculum in schools. Partners in West Yorkshire are committed to continued efforts to extend the quality and availability of online interactive education and learning tools in schools as well as for adult learners.

- **Smart transport systems:** intelligent transport systems to manage traffic flows are already operational in urban areas of West Yorkshire. Partners are committed to continued deployment of ITS technologies and are focused on seeking to develop links between local systems and sharing data and intelligence amongst the boroughs of West Yorkshire.

B2. Demand Registration

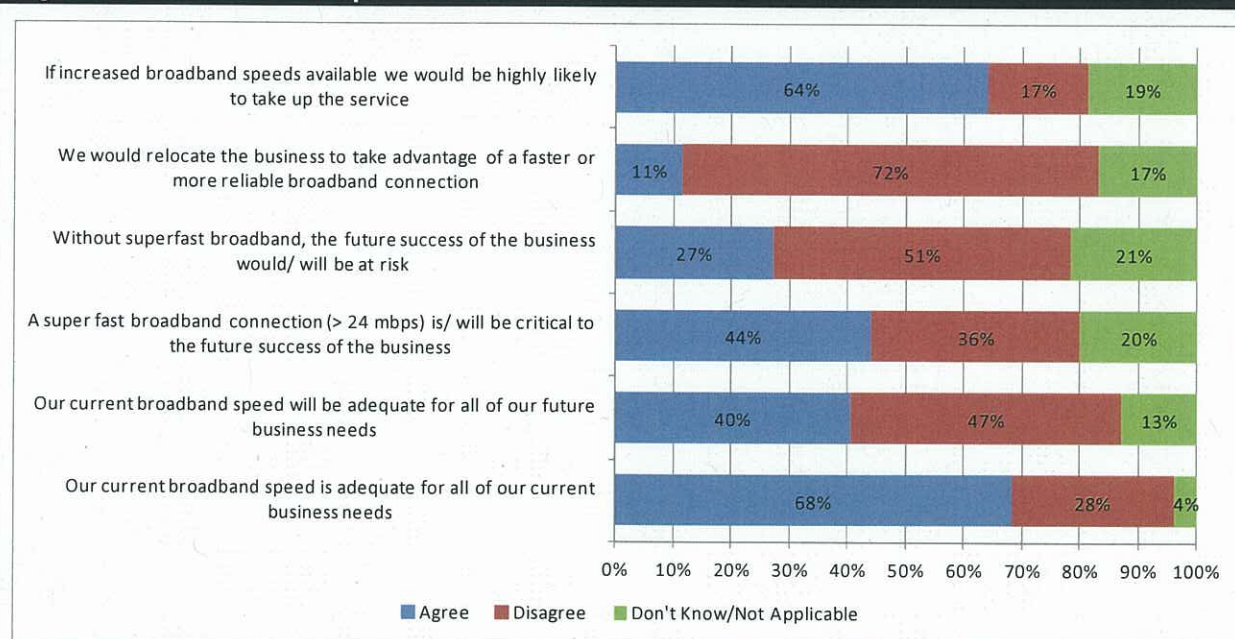
Partners are keen to make good use of the proposed Demand Registration tool being developed by BDUK. In the meantime, we have assembled evidence of demand from local surveys and sources.

Although formal demand registration activities are not yet underway there is some emerging evidence of demand within West Yorkshire from a survey of businesses based in Leeds, York and North Yorkshire. Although it does not cover the full West Yorkshire business base, this survey evidence provides a useful indicator of the latent demand for increased broadband speeds existing in West Yorkshire.

Figure 15 provides a summary of the results with some key points being that:

- Almost two thirds of businesses (64%) would be highly likely to take up increased broadband speeds if they were available
- 60% of businesses either do not consider their broadband speeds to be adequate for their future business needs, or they don't yet know/NA.
- 64% of businesses either consider superfast broadband to be critical to the future success of their business, or they don't yet know/NA.

Figure 15: Demand for Superfast Broadband



Source: Business Needs Survey 2011, Leeds, York and North Yorkshire

A separate business earlier survey was conducted in Calderdale and Kirklees, which provides further evidence of the importance of broadband to the business community. A key point from the survey indicated that 43% of those businesses without broadband access or speeds were considered insufficient, consider that access to broadband / higher speeds would improve their business performance.

B3 Stakeholders

Bid Development Process & Partner Engagement

This Local Broadband Plan (LBP) has been developed in close collaboration between the five participating unitary authorities: Bradford; Calderdale; Kirklees, Leeds and Wakefield Councils. Representatives from each partner organisation were identified and attended regular steering group meetings to work with their jointly appointed advisors (Regeneris Consulting & Mott MacDonald). They have worked with the understanding of the West Yorkshire Leaders through the Association of West Yorkshire Authorities, whom have been kept fully informed and have provided the political steer for the Plan.

The local authorities have engaged with key stakeholders through a variety of means to date. Reports and briefings have been taken to Leader Group briefings, Cabinet meetings, Local Enterprise Partnership meetings, Ward Forums, and the West Yorkshire Rural Partnership.

MPs across the district have been briefed on the West Yorkshire Local Broadband Plan. For example in Calderdale, MPs have been briefed on the opportunities arising from the broadband plan and the strong messages from business from the local broadband survey.

Much of this is long term engagement. For example, in Kirklees, MPs were closely involved in the development of rural broadband pre 2010

Kirklees Council has worked with Denby Dale Area Committee and Denby Dale Parish Council since 2009, undertaking a public broadband survey, holding several public meetings and working with a subsequent local public action group to progress broadband opportunities in rural villages in the area.

Engagement and demand stimulation with rural businesses has been key to developing the plan. Engagement has so far taken the form of ongoing development with, for example, the Colne Valley Business Network and face to face visits with SME businesses and landlords across the area's business and industrial parks.

Press releases from both individual authorities and the Leeds City Region have been released and have had positive follow up enquiries from the public and media. Social media have also been used to engage with key stakeholders.

Bid Supporters

The Local Broadband Plan (LBP) is supported by:

- The five unitary authorities: Bradford Metropolitan District Council; Calderdale Metropolitan Borough Council; Kirklees Metropolitan Borough Council; Leeds City Council; and City of Wakefield Council.
- Within these organisations associated services (Economic Development, ICT, Highways and others) as well as other public sector partners have been consulted, and continue to be involved, in investigating public asset, public sector network and related matters.
- The Leeds City Region (LCR) Partnership comprises the eleven local authorities (in addition to the five unitary authorities above): Barnsley Metropolitan Borough Council; Craven District Council; Harrogate Borough Council; North Yorkshire County Council; Selby District Council and City of York Council; in addition to the LCR Local Enterprise Partnership (LEP). The LEP Board brings together a range of private sector Members together with local authorities to promote economic growth and competitiveness. The recently published LEP Plan (Sept 2011) recognises broadband as a key part of the economic infrastructure of the city region, which is and will increasingly impact on business growth and competitiveness.

Ongoing Stakeholder Engagement Through Delivery

The programme will continue with Stakeholder Engagement through procurement and then delivery. We are aware of the BDUK recommendations, not least for State Aid reasons, for public demand survey, customer registration and community engagement, and supplier/market assessment. We therefore intend to undertake these activities after confirmation of LBP approval, for at least the minimum durations (over 1 month) and completing just before (within 1 month of) commencement of the call-off under the framework, as is best practice. We will build on community engagement activity already being undertaken with local parishes and communities, such as in relation to the Rural Broadband Fund opportunities.

SECTION C – FINANCIAL INFORMATION

C1 Funding Requirements

The total capital cost of our preferred plan has been estimated using the cost model provided by BDUK. The only changes made to the base assumptions in the model related to the assumed IRR and model life which do not affect the capital cost.

The total capital cost of the network deployment to 2017 is [REDACTED]. Our allocation from BDUK is £6.34m. Local authorities have agreed to match the BDUK funding and an ERDF bid for [REDACTED] is also being prepared. This resource will in part provide resource for our business support scheme. The intention is to lever in the maximum amount of private sector funding to match the public sector contributions to support the cost of deployment. Expected total public sector funding into our scheme is £12.68M, [REDACTED]. The operational costs are expected to be met by the network operator from revenues.

The funding table shows the phasing of the funding required between 2012/13 and 2015/16. We expect the majority of capital costs to be incurred in the first two years (2012/13 & 2013/14), including all costs associated with connection to the core network. The costs incurred in subsequent years relate to line migration and MSAN costs. We believe this phasing leaves sufficient time to develop projects and award contracts to suppliers before the draw down of funds related to implementation.

In addition to seeking capital funding to invest in the deployment of the network, we are also seeking revenue funding from ERDF and local authorities to help fund a complementary programme of demand stimulation and business support. These have been costed separately (see Section B1).

Funding Table

<i>Total funding required (GBP)</i>	<i>2012-2013</i>	<i>2013-2014</i>	<i>2014-2015</i>	<i>2015-2016</i>
£	millions	millions	millions	millions
Private sector (Telecom Company) investment	[REDACTED]	[REDACTED]	[REDACTED]	
Sub Total	[REDACTED]	[REDACTED]	[REDACTED]	
BDUK funding	[REDACTED]	[REDACTED]	[REDACTED]	
Other funding (Local Authority/Primary Care Trust)*	[REDACTED]	[REDACTED]	[REDACTED]	
Sub Total	[REDACTED]	[REDACTED]	[REDACTED]	
Other funding (European/ERDF)	[REDACTED]	[REDACTED]	[REDACTED]	
TOTAL	[REDACTED]	[REDACTED]	[REDACTED]	
Number of postcodes covered by the funding	[REDACTED]	[REDACTED]	[REDACTED]	
Number of premises (residential and non-residential) covered by the funding	[REDACTED]	[REDACTED]	[REDACTED]	

* Note: may also include an element of the ERDF funding.

C2 Funding Structure

Cost Modelling Assumptions

We have relied upon the BDUK Cost Model. The only changes to the base assumptions were:

[REDACTED]

[REDACTED]

Proposed Investment Plan

Partners intend to embark upon a simple gap funded approach. The appointed network operator will build, own and manage the network.

SECTION D – COMMERCIAL INFORMATION

D1 Commercial Case

West Yorkshire partners plan to use the BDUK framework and the 'gap funding' model. We will also explore opportunities to co-procure with others programmes.

D2 Market Engagement

To Date

The West Yorkshire authorities have begun market engagement to understand the intentions and plans of the market. Discussions have been held with BT, Virgin Media Business, Kcom, Fujitsu, O2, and Sky.

A summary market assessment has been completed finding that 'the BDUK baseline, and forecast white areas, are believed to be valid for the purposes of this programme. However it is noted that:

- i) Much of the geography of West Yorkshire can be served by wireless leased line services (as well as wireline leased line services), including those provided by Metronet (UK) Ltd. These are to be welcomed as they provide potentially attractive services. However, they are targeted at larger enterprises and/or backhaul for others rather than the mass (SME and residential) market and therefore probably fall outside of the BDUK definition;
- ii) Digital Region is a publicly-funded endeavour expected to offer services within the BDUK service definition and reported to be available within the wider Leeds City Region (that includes Barnsley). However, it is not within West Yorkshire and so is not considered in this document
- iii) Other telecommunications companies, for example City Fibre Holdings, which were named as companies of interest, are not believed to currently provide services within the BDUK definition in West Yorkshire [although they, like others, are actively talking to the public sector now];and
- iv) As the BDUK framework develops to be finalised, and with Ofcom as the arbiter of market assessments within the ongoing progress, it is recommended that any market changes over time are monitored, and the market assessment might be repeated with the assistance of BDUK and Ofcom to confirm this position remains valid.

Moving Forward to Procurement

Prior to entering into the mini-competition the market assessment will be refreshed as above and to account for the moving market position. Some market players are noted to be positioning themselves in light of the BDUK framework and so this will need to be accounted for at that time.

D3 Procurement Strategy

Partners intend to use the BDUK framework for their procurement.

Readiness

The anticipated readiness date to commence a mini-competition under the Framework is Monday 2nd July 2012. This would allow three months preparation after acceptance of this LBP, including market warming and briefing, to allow for suppliers' tender submission in September for contract award in the autumn.

Given the work completed already by BDUK in establishing a framework, and as there are only three bidders, the early (optional) stages of the call-off procedure are not considered necessary (other than 'market warming' which is recommended). In the context of pilots and earlier users of the framework, the benefit of early contract and service availability is expected to outweigh prolonging of the process.

Local Adaption

The Call-Off evaluation will follow the required BDUK framework approach, associated baseline criteria and weightings ranges. These are noted as being:

- 'Value and Pricing', as 'affordability and leverage' and 'contract and commercial fit'; with
- 'Quality', as 'local solution design', 'solution outcomes'; and 'delivery'
- It is likely that local use of the associated weightings at all three levels (the two above, plus level 3 sub-criteria not shown) will be mid-range with notable emphasis in the form of higher percentages within the allowable weighting ranges of 'Quality' including:
 - 'Extent of Coverage';
 - 'Superfast Broadband'; and
 - 'Implementation Plan'

This will be in recognition of the relatively urban nature of the area (although West Yorkshire does have rural areas) and consequently high ambition for widespread Superfast Broadband as well as close to 100% basic broadband.

Assessing Value For Money

Value for Money will be judged as the Most Economically Advantageous tender in accordance with the findings of this evaluation.

Resourcing the Procurement

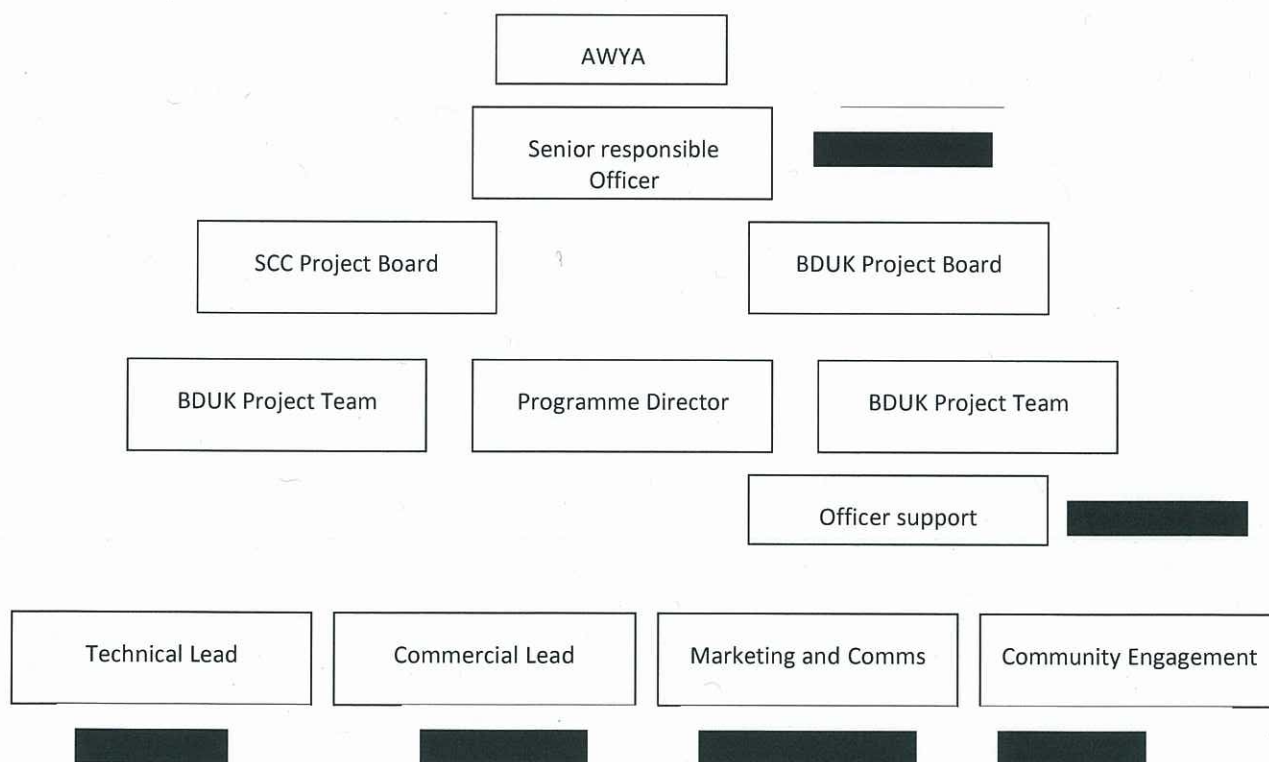
A procurement team will be assembled with the representatives from each of the five local authorities plus independent advisors, all of whom are already in place and have been involved in preparing this LBP. Each aspect of evaluation (technical, commercial and financial) will be evaluated by at least two people, one being an independent. In this way the evaluation is expected to be impartial, objective and representative of all stakeholders.

SECTION E – DELIVERABILITY

E1 Project Management Resourcing and Funding

Governance and Management Arrangements

- A Senior Responsible Officer and Programme Director/Manager will be appointed to drive the project through from start to finish.
- A Project Team will be established including from all five West Yorkshire authorities with lead responsibilities for: Technical; Commercial ; Marketing, Communications and Demand Stimulation and Community Engagement.
- The Project Team will be supported by economic, technical, procurement and legal advisors across West Yorkshire authorities, likely also with specialist external expertise to support implementation and delivery over the period of the contract.
- Overheads and extraneous costs will be kept to a minimum by utilising host authority(s) premises and resources, where necessary.



Further ad hoc support:

Policy research - 4 days per month

Communications - 2 days per month

Legal - 2 days per month

ICT - 2 days per month

Project Team and Programme Resource funds (Revenue)	2011 - 2012	2012 - 2013	2013 - 2014	2014 - 2015
Budget includes:				
Project Team	██████████	██████████	██████████	██████████
Advisors	██████████	██████████████████	██████████	██████████
Demand Stimulation*	██████████████████	██████████	██████████	██████████
Overheads / other costs	██████████	██████████	██████████	██████████
TOTAL			██████████	██████████

E2 Timetable

To be confirmed in Dialogue with BDUK. However, subject to an early decision by BDUK, it is anticipated that the procurement process will begin in June / July 2012, with contracts in place and delivery beginning by January 2013.

BDUK Sign off Local Broadband Plan – April 2012

Demand stimulation and registration work - April 2012

State aid public consultation – May 2012

Completion of data room – June 2012

Enter Procurement – July 2012

Consideration of bids – September 2012

Call off Framework process – October to December 2012

Award contract – December 2012

Implementation – January 2013

Post implementation review and audit – July 2015

Critical Path Dependencies

West Yorkshire partners will work with BDUK and make use of the national State aid and procurement framework being established. Partners are keen to secure an early slot to progress their procurement and are confident that the material needed to secure state aid clearance can be readily assembled. Co-investment commitments from partners are in place. Although ERDF will be sought, this is not an absolute requirement for the scheme to progress.

E3 Expected Strategic Benefits

1. Underpinning Economic Competitiveness

We have already identified the likely scale of impact on GVA and Jobs as a direct result of our preferred plan. We estimate that the plan could **generate £60m for the economy of West Yorkshire** over 15 years and **create around 800 new jobs**. These figures are based on a bottom-up economic model which applies evidence of the impact of broadband to business data for the areas covered in our preferred plan. It includes the following:

- **The benefits accruing to existing businesses which improve productivity or increase output.** An earlier study of the impact of ADSL by Micus Management quantified the business benefits across a range of sectors. We have assumed that the business impacts generated by superfast broadband will be around half of the impact of ADSL, and applied this to business data for the areas covered in our plan.
- **New business formation and growth.** The model estimates the number of new businesses created due to reduced barriers to entry as a result of superfast broadband, and their subsequent growth. This has drawn upon findings from another study which quantifies the number of start ups due to cloud computing¹¹. We estimate that the plan could **lead to over 500 additional businesses** in the plan area over 15 years, supporting 800 new jobs.

Both of these benefits will result in increases in GVA and employment growth in the plan area. However they will be difficult to measure and attribute to the broadband intervention using publicly available datasets. They could however be measured and monitored using business surveys in the plan area.

Table 18: Preferred Plan Estimated Impacts

	GVA £M	Jobs
Bradford	0.7	10
Calderdale	30.5	420
Kirklees	13.7	190
Leeds	5.0	70
Wakefield	8.0	110
TOTAL	57.9	800
Calculations by Regeneris Consulting		

Other economic benefits which superfast broadband will generate include the following:

- **Inward Investment:** As stated in Section A1, West Yorkshire has underperformed in terms of attracting inward investment to the sub region. There is little quantitative evidence of the link between inward investment and broadband speeds, however numerous business surveys have shown that telecommunications infrastructure is one of the most important determinants of FDI. We therefore expect the broadband plan to deliver an increase in the number of new inward investment projects in the sub region which can be monitored using UKTI data.
- **Priority Sectors:** West Yorkshire's priority sectors include the creative and cultural sector, financial services, digital industries and advanced manufacturing. These are among the most likely to adopt and exploit superfast broadband since they depend on being able to share and analyse large quantities of data, and to access and supply new markets. The broadband plan will provide access to

superfast broadband to 1,700 businesses in priority sectors and support their continued growth. The business benefits accruing to these business could be monitored through survey data which includes a large sample of businesses in priority sectors.

- **Supporting Rural Businesses:** The preferred plan covers many rural areas and small towns in West Yorkshire. Extending access to superfast broadband will be of particular benefit in these locations since it will increase the number of micro-businesses in knowledge based sectors which depend on ICT. This can play an important role in attracting the higher skilled, high earning people we need to retain to underpin diverse and vibrant communities. Business databases could be used to identify any increases in the business base in these areas, however attributing impact to broadband will, again, require survey evidence which includes a large sample from new businesses in rural areas.

2. Extending opportunity

Improving Access to Employment for Excluded Groups

We estimate there are around 160,000 people who face significant barriers to work in West Yorkshire, either because they are lone parents, have a disability or impairment, or because they care for sick relatives. We estimate that between 10,000 and 15,000 of these people live within the area included in our broadband plan.

Faster broadband speeds has the potential to improve the accessibility of employment opportunities by enabling people who spend a large amount of time at home to adopt more flexible working practices or start up a business at home. Faster broadband will also increase the range of occupations which can be carried out at home. This could include lower skilled occupations such as call centre operators which may be suited to people who have spent a long time outside the labour market.

We believe it is reasonable to aim for a 5% increase in people accessing employment in this way, which would result in 500-750 people benefiting. This could be monitored by partners who work with groups facing barriers to work.

Education Benefits

We expect the preferred plan to improve access to digital resources for students of all ages. Although it will be difficult to demonstrate and attribute to broadband, we also expect this to raise educational attainment. Improved access to digital resources could be monitored by the local education authority.

Faster broadband speeds will also result in more online distance learning at degree level. There are no data sources which capture all students enrolled on online courses, however the overall number of registrations on Open University courses can be tracked using HESA data for students based in West Yorkshire. Recent data at UK level shows that Open University registrations have increased at a much faster rate than conventional degree courses since 2006 (at 6% per year). This has partly been attributed to faster internet speeds and the range of digital resources which this enables.

A greater number of online learners will improve the skills of West Yorkshire residents and may help to increase the rate of graduate retention within the sub region. This delivers both social and economic benefits.

Access to Services

The aspiration of this plan is that everyone in rural areas should be able to access services at the same level as their urban counterparts. This could be monitored through "quality of place" surveys carried out in the sub region or through qualitative assessments such as case studies.

Social and Community Cohesion

This is very difficult to measure but we would expect faster broadband to allow people living in isolated communities to keep in touch with friends and family, or participate in social network sites, which will improve their quality of life. Again, the benefits are probably best assessed through qualitative assessments

such as case studies.

Access in Deprived Areas

7,000 premises included in our plan are in LSOAs which are assessed as being in the 20% most deprived areas in the country. The plan will therefore ensure that these areas benefit from the same opportunities as more prosperous areas

3.Environmental Benefits

Reduced Commuting

Improved broadband provision will create opportunities for people to work from home, which in turn will have a marked affect on the number of commuting trips and potentially reduce carbon emissions. Evidence from elsewhere suggests that the number of commuting trips can be reduced by between 5 and 10% as a result of more flexible working patterns. It has not been possible to estimate the total number of commuting trips currently made each day by residents in the plan area. However we will be able to estimate this when data for small areas from the 2011 Census is published. Progress can then be measured using household surveys. The total carbon emissions saved can be estimated using DEFRA data which shows average emissions per mile for different forms of transport.

Smart Grids and Traffic Systems

Smart Grids have yet to be deployed in West Yorkshire, however an integrated digital communications network is an important first step. If a smart grid is subsequently deployed we would expect to see a reduction in total energy consumed which would translate to significant carbon savings. This could be monitored through the publication of energy consumption by the grid operators.

Intelligent transport systems to manage traffic flows are already operational in urban areas of West Yorkshire. This reduces congestion and can be monitored through any evaluations carried out at a later date.

4. Enhancing Public Sector Service Delivery

Shifting public sector services online as part of the e-government agenda will be expected to generate cost savings through increased efficiency. At this stage it has not been possible to quantify the potential cost saving, however, as the plan area covers the most rural parts of the sub region, we expect the cost savings to be considerable as face to face delivery costs are higher in rural areas

We will monitor the range of services delivered online in West Yorkshire and estimate the savings associated with doing so. These savings will be generated across West Yorkshire as a whole, but we will apportion the savings to the areas covered in our plan.

In the case of telehealth, the Kings Fund WSD Action Network Evidence Base includes evidence from a number of pilots in the UK and the vast literature from the US. It shows that hospital admissions are reduced on average by between 24% and 54%. Telehealth programs therefore have significant potential to deliver major cost savings. These benefits will be monitored through evaluations of any telehealth services delivered in the sub region, using data available through the NHS Information centre. This includes the estimated unit costs for hospital admissions, referrals and consultations for people with long term conditions and can be used to estimate the total costs savings.

Measurement and Monitoring

Monitoring and realising the benefits of this plan will require a combination of data collection on quantitative indicators alongside more qualitative case study information. As is clear from the above, attributing impact to broadband will, in many cases, require original research comprising surveys of end users.

We have selected appropriate indicators to record and track progress on from the Monitoring and Evaluation Framework for BDUK projects. Intermediate impacts and net additional impacts will be assessed as part of the final evaluation of the programme.

Table 19: Proposed Indicator Framework

<i>Indicator Type</i>	<i>Indicator</i>
Financial Inputs and Outputs	Public sector investment (£s) • BDUK resource • Local Authority • Other public sector • Additional grant investment (e.g. from ERDF) • Private sector investment (£s) • Capital expenditure on network construction (£s)
Construction and Operation of Network	Amount of fibre (kms) • Newly laid • Leased • Made accessible • Wireless / satellite reach (Hectares) • New wireless coverage • Satellite only coverage • Network operations and structure • Number of aggregated access points
Exploitation of Network	• Number of urban and rural premises with enhanced speed potential • Residential • Business • Mixed Use • Number of ISPs or other service providers signed up to deliver • Number of public sector premises connected to the network
Availability and Adoption	• Number of residential and business premises able to access broadband speed brackets • Urban and rural breakdown • Number of residential and business users • Urban and rural breakdown
Intermediate Impacts	• Number of new home based businesses • More efficient production (% pa) • New FDI projects • Reduced living costs (residents) • Enrolment on online courses • Enhanced earnings (residents) • Increased home working • More efficient delivery of public services (% pa)
Impacts	• Employment • Profitability • Turnover • GVA • Disposable income / time benefit composite indicator

E4 Risk Management/Log

Table 20: Risk Log

Description of Risk		Likelihood	Severity	Threat to project / mitigation
Procurement				
1	Delays to the programme caused by legal challenge from unsuccessful bidders	M	M	High: Ensure that procurement process is robust and meets national and EU guidance. Seek input and guidance from BDUK and procurement specialists at all stages.
2	Failure to obtain (or delay in obtaining) State Aid approval for project	L	H	Medium: Develop a robust and appropriate procurement process in consultation with BDUK and legal advisors. Ensure that national and EU requirements are fully satisfied
3.	Failure to secure good value supplier due to weak competition during procurement process.	L	H	Medium: Engage with market early in the process and test all appropriate procurement models. Ensure team is experienced and taps into expert procurement support.
4.	Fail to attract sufficient providers to ensure that the procurement process is competitive	M	H	Medium: Engage with potential providers at early stage. Ensure procurement plan includes full consideration of methods to improve competition.
5.	Failure to attract an appropriate broadband supplier	L	H	Medium: Early market engagement, ensure approach is attractive to broadband suppliers. Demand stimulation activity and use of public sector assets to remove risks from suppliers.
Funding				
6.	Local Authority Partners unable to fund their share of project costs	L	H	Low. Ensure revenue and capital costs are signed off and confirmed by senior executives at all authorities. Ensure that forecast costs are as accurate as possible by undertaking detailed planning and financial modeling stage. Draw up legal agreements covering cost sharing amongst authorities.
7.	Project does not attract sufficient private sector investment	M	M	Medium: Ensure that demand stimulation approach is robust, develop a rigorous approach to registering evidence of demand to ensure private sector views this as valid.
8.	Failure to secure ERDF investment	M	H	High. Early engagement in ERDF application process and liaise with ERDF project team to ensure that potential issues (e.g. eligibility) can be explored and addressed.
9.	Failure to secure sufficient investment to deliver all aspirations set out in the plan	M	H	High. Fully explore all potential funding opportunities. Develop a robust financial plan and evidence base relating to potential impacts and wider benefits.
Management and Governance				
10.	Insufficient capacity at partner authorities to manage the delivery of the plan	L	H	Medium: Identify and safeguard adequate resources for delivery of plan at each authority. Ensure robust and appropriate governance arrangements.
11.	Delays caused by lack of agreement amongst authorities or	L	H	Low: Bid developed in partnership amongst authorities so authority buy in already strong.

	fundamental disagreement causing partnership to fail			Robust governance and partnership arrangements in place.
	Loss of key project staff causes lack of continuity	L	M	Low. Ensure appropriate approach to intelligence sharing within the project team.
Delivery Impacts				
12.	Emergence of new, more advanced technological solution mid-way through rollout	M	L	Low. Ensure that procurement process emphasizes importance of future relevance of selected technologies.
13.	Delays in securing planning consent for some elements of the programme delays network delivery	M	L	Low. Early engagement with relevant planning authorities to identify and iron out potential problems. Ensure application process is well managed.
14.	Failure to secure funds to stimulate demand results in low levels of take up and exploitation.	M	H	Medium. Early engagement in ERDF application process and liaise with ERDF project team to ensure that potential issues (e.g. eligibility) can be explored and addressed.
15.	Delivery costs exceed available funds.	M	M	Medium. Robust approach to financial modeling. Well specified contracts for providers. Robust contract management.
16.	Delivery is not carried out to a sufficiently high standard	M	H	High. Include full specification of required standard in contract. Close and detailed contract management with suppliers and ISPs.
Impacts:				
17.	Anticipated level of take up is not achieved	M	M	Medium. Ensure a high quality and well resourced approach to demand stimulation. Draw on the expertise of an experienced team to stimulate demand.
18.	Impacts on public sector service delivery are not realized	L	H	Medium. Clearly scope out an approach to engaging with and securing commitment of senior executives across the public sector.

SECTION F – STATE AID

F1 State Aid Confirmations

We are aware of the State aid implications of our plan. We have deliberately configured a plan which only focuses on white premises as defined by European Commission guidance. We will continue to review market roll-out through the planning and delivery phase of our programme and will ensure resources are exclusively invested in demonstrably white areas where we have clear approval.

We plan to undertake a state aid compliant procurement process which will involve

- Procuring a whole sale open access network (min 7 years duration)
- A technology neutral approach NB the cost modelling contained in our plan will be used as pre-tender estimates and will not be used to predetermine the end solution.
- Benchmarking of wholesale prices
- Reporting obligations to comply with ongoing alignment with state aids approval and investors reporting requirements
- A claw-back mechanism where super-profits are generated or ineligible expenditure incurred.

CEO sign off/Section 151 Officer/Executive Member (portfolio holder)

a) Submission:

In submitting the Local Broadband Plan, I verify that the proposal fits with corporate policy

Signed: 

Name: Owen Williams

Job Title: Chief Executive, Calderdale MBC

Date: 29 February 2012

Appendix 1: Estimating Future Expansion of Fibre Roll-Out

We have allocated exchange areas to one of the geo-types used in the 2008 Analysys Mason report which estimated the costs of deploying fibre in different locations, and used this to determine which areas were at risk of not receiving NGA.

Geotypes were determined by an area's population density, the number of lines in the exchange area and the length of these lines. This was used as the basis for determining which exchanges will be announced for upgrade to FTTx by the private sector in the next 12 months. Those exchanges in geotypes with high estimated cost per premise were included in the preferred plan as it is unlikely that the market will enable them. Those exchanges in geotypes with low cost per premise were excluded from the plan. The only 'low cost' exchanges which weren't already included in the market roll out were in central Leeds, central Bradford and Batley.

Table 18: Geotype Categorisations

<i>Category</i>	<i>Description</i>	<i>Cost per premises £ (AM)</i>	<i>Include in Plan</i>
<1k lines (b)	Rural dispersed	■	Yes
>3K lines (b)	Edge Urban dispersed	■	Yes
<1k lines (a)	Rural clustered	■	Yes
>20K lines (b)	Large Urban dispersed	■	Yes
>1k lines (b)	Semi rural dispersed	■	Yes
>10K lines (b)	Small Urban dispersed	■	No
>3K lines (a)	Edge Urban dispersed	■	No
>500K pop	Major City	■	No
>1k lines (a)	Semi rural clustered	■	No
>20K lines (a)	Large Urban clustered	■	No
>10K lines (a)	Small Urban clustered	■	No