



**Milton Keynes, Central Bedfordshire and Bedford  
Joint Local Broadband Plan (JLBP)**

**Revised Submission Version, April 2012**

(Based on revised BDUK template of 23 December 2011 and feedbacks from BDUK)

Release date: 20 April 2012

## APPLICANT INFORMATION

<b>Project Name</b>	Milton Keynes, Central Bedfordshire and Bedford Joint Local Broadband Plan (JLBP)
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<b>Names of all participating bodies and the co-ordinating authority</b>	Milton Keynes, Central Bedfordshire and Bedford Borough Councils are partners in the development of a joint LBP. Central Bedfordshire is the co-ordinating authority for the joint LBP
<b>Start Date of Project</b>	Procurement phase start date <b>August 2012</b> Anticipated Contract Award date: <b>December 2012</b>
<b>End Date of Project</b>	Completion of network deployment date: <b>March 2015</b>

## Contents

<b>EXECUTIVE SUMMARY</b>	<b>1</b>
<b>SECTION A – PROJECT OVERVIEW</b>	<b>3</b>
A1 Vision and strategic context	3
A2 Background to the broadband project	9
A3 Local broadband context: evidence of need and gap analysis	18
A4 Scope of project	20
<b>SECTION B – CUSTOMER AND COMMUNITY ENGAGEMENT</b>	<b>23</b>
B1 Existing initiatives and engagement activities	23
B2 Demand stimulation	25
B3 Demand Registration	27
B3 Stakeholders	30
<b>SECTION C – FINANCIAL INFORMATION</b>	<b>32</b>
C2 Funding structure	33
<b>SECTION D – COMMERCIAL INFORMATION</b>	<b>34</b>
D1 Commercial case	34
D2 Market engagement	34
D3 Procurement strategy	34
<b>SECTION E – DELIVERABILITY</b>	<b>36</b>
E1 Project management, resourcing and funding	36
E2 Timetable	39
E3 Expected strategic benefits	40
E4 Risk management/Log	42
<b>SECTION F – STATE AID</b>	<b>47</b>
<b>Annex A – Supplementary information: Maps</b>	
<b>Annex B – Supplementary information: Strategic benefits</b>	
<b>Annex C – Supplementary information: Evidence of stakeholder engagement and funding approval</b>	
<b>Annex D – Supplementary information: Terms of reference for Joint Broadband Program Board (JBPB)</b>	

## EXECUTIVE SUMMARY

### Why the Joint Local Broadband Plan is required

The evidence gathered from the Bedfordshire and Luton Business Survey (2011), Milton Keynes Broadband Survey, Bedford Citizens Panel Survey (2011), Central Bedfordshire Residents Survey (2011), the Ofcom report on broadband provision in the UK, and data from BDUK, all suggest there are significant inequalities in broadband speed availability across our areas (Bedford Borough Council, Central Bedfordshire Council and Milton Keynes Council areas), particularly between the rural and urban communities. The rural populations are generally more spread out and less concentrated, therefore delivering new infrastructure such as broadband to these communities can be prohibitively expensive. Consequently, industry has focused on more profitable urban areas with greater numbers of potential customers. This has created a situation of market failure predominantly in the rural or outlying urban areas.

In December 2010, the UK Government launched a strategy entitled “Britain’s Superfast Broadband Future” to resolve the above issues. A key objective of the strategy is to put in place a framework capable of better supporting the roll-out of Next Generation Access (NGA) Broadband and improved basic broadband. The strategy’s vision is a Britain in 2015 where (a) the majority of residential and business premises (at least 90%) have access to NGA broadband speeds of at least 24Mbit/s, and (b) there is a Universal Service Commitment (USC) to provide access speeds of at least 2Mbit/s to everyone. The Government has committed to providing GBP530 million of funding, to be administered and allocated by the Government’s broadband delivery arm, Broadband Development UK (BDUK), towards delivering this vision and encouraging further investment by the public sector and industries. Of these funds, **GBP140,000** has been allocated to Milton Keynes, **GBP620,000** has been allocated to Central Bedfordshire, and **GBP440,000** has been allocated to Bedford towards a Joint Local Broadband Plan (JLBP) – subject to the Government’s approval of the JLBP.

Our partner authorities have made a significant financial contribution in excess of **GBP4.04 million** capital (revenue funding has also been identified), in addition to any available funding from BDUK towards the delivery of the JLBP. The implementation of the plan underpins the economic growth in our areas and will enable better delivery of public services to our citizens.

### Support for the joint local broadband project

The broadband infrastructure vision for our area is to ‘**Deliver improved broadband with at least 90% NGA and a minimum of 2Mbit/s for all by 2015, and moving towards NGA for all by 2020.**’

This vision has been developed and approved by our Joint Broadband Programme Board, which has been established to enable and support the production and implementation of the JLBP across the Bedford Borough, Central Bedfordshire and Milton Keynes areas. The primary objectives of the partnership board include promoting partnership and involvement with the JLBP among the area's communities (business and residential) and public service agencies, and supporting the procurement processes required for the delivery of the JLBP.

The plan is backed by the South East Midlands Local Enterprise Partnership, the Rural Communities Representative (Bedfordshire) and the Older People Representative (Milton Keynes), which are represented on our joint board. Further to this, the partner local authorities have identified a number of relevant local partnerships, including Town and Parish councils, education partners, the voluntary sector, local businesses and wider public sector partners. These groups have considered the development of the plan with respect to local issues and the promotion of local support for the plan.

The preparation of the JLBP has also been informed by what the residents and businesses in our areas have told us. We are continuously engaging with them to promote the community benefits and business use of broadband, and encourage investment in broadband infrastructure and broadband improvement in the area.

### **Structure of the Joint Local Broadband Plan**

The content of the JLBP is based on the revised BDUK template of 23 December 2011. The plan outlines the strategic need for improved broadband provision in our areas, and in particular details the opportunities and challenges that the partner authorities would be faced with assuming the existence or non-existence of improved broadband. The JLBP also sets out the vision, business case and commercial and procurement plan for the delivery of the NGA broadband project.

## SECTION A – PROJECT OVERVIEW

### A1 Vision and strategic context

#### A1.1 Summary

Delivering this joint broadband plan is a major contribution we can make towards our vision and ambition **for a greener environment and to be a desirable place to live and work and an attractive business investment location suitable for delivering sustainable economic growth.** This is so for our individual local authority areas and for the wider South East Midlands Local Enterprise Partnership (SEMLEP) area within which we are located. Details of each of our partner authorities' wider visions for our areas can be found on our respective websites.<sup>1</sup>

Delivering this plan is also the single greatest contribution we can make to the UK Government's vision of becoming the best networked country in Europe by 2015.

#### A1.2 Background

The Bedford, Central Bedfordshire and Milton Keynes total area is just over **1500 sq km** in size, with a population of over **650,000** situated between London and Birmingham and between Oxford and Cambridge. **Bedford Borough** comprises a sizeable largely rural area of 475 sq km around its two main towns of Bedford and Kempston. **Central Bedfordshire** is a larger mainly rural area of 718 sq km but around 7 significant towns – Sandy, Biggleswade, Ampthill, Flitwick, Dunstable, Houghton Regis and Leighton Linlade. Milton Keynes, with an area of 309 sq km, is largely the city itself but includes the smaller towns of Newport Pagnell and Olney, and some rural area, mainly to the city's north. See below for more detail and map of the area in Figure 1.

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<sup>1</sup> For **Milton Keynes**, [http://www.miltonkeynes.gov.uk/council-business/documents/Final\\_doc\\_-\\_Economic\\_Development\\_Strategy\\_26.07.11.pdf](http://www.miltonkeynes.gov.uk/council-business/documents/Final_doc_-_Economic_Development_Strategy_26.07.11.pdf)

For **Central Bedfordshire**, <http://www.centraltogether.org.uk/download/sustainable-community%20-strategy-media/100709%20SCS%20evidence%20base.pdf>

For

**Bedford**, [http://www.google.co.uk/search?q=bedford+borough+sustainable+community+strategy&hl=en&source=hp&gbv=2&gs\\_sm=e&gs\\_upl=2432186131018990133129101191191013761178910.6.3.1110](http://www.google.co.uk/search?q=bedford+borough+sustainable+community+strategy&hl=en&source=hp&gbv=2&gs_sm=e&gs_upl=2432186131018990133129101191191013761178910.6.3.1110)

[http://www.bedford.gov.uk/business/strategies\\_plans\\_and\\_research/economic\\_development\\_strategy.aspx](http://www.bedford.gov.uk/business/strategies_plans_and_research/economic_development_strategy.aspx)

[http://www.bedford.gov.uk/business/strategies\\_plans\\_and\\_research/economic\\_development\\_strategy.aspx](http://www.bedford.gov.uk/business/strategies_plans_and_research/economic_development_strategy.aspx)

For **SEMLEP**, <http://www.southeastmidlands.org.uk/>

Figure 1: Geographical map [Source: Analysys Mason, CBC, MK, Bedford, 2012]



### Bedford Borough

Nearly two thirds of Bedford Borough's total population of c.161,000 live in the Borough's two centrally located main towns of Bedford (population c.82,000) and Kempston (population c.20,000). The rural area (population c.59,000) comprises some 45 parishes, many of which are made up of collections of smaller settlements, and have populations ranging from about 20 people to over 5,000.

Major business concentrations are Bedford Town Centre and 5 industrial estates and business parks around the edge of the Bedford/Kempston conurbation (Elms and Viking Industrial Estate, Priory Business Park, Cambridge Road Industrial Estate, Woburn Road Industrial Estate and Manton Line Industrial Estate).

### Central Bedfordshire

The population of Central Bedfordshire was 255,200 in 2010. This is an increase of approximately 21,500 (9.2%) since the last Census took place in 2001. This is a rate of growth greater than regional (8.2%) and national (6.3%) levels. Central Bedfordshire has a higher percentage of working age people within its population (65.1%) than regional (63.7%) and national (64.8%) levels. Central Bedfordshire is the 18<sup>th</sup> largest unitary council in England by population size and 11<sup>th</sup> largest unitary council by area.

## Milton Keynes

Milton Keynes is one of the fastest growing places in the UK, and the population has quadrupled from 1967 to 2010, with over 241,000 residents. It was formally designated as a new town in 1967. The designated development area (now largely built out) incorporated the pre-existing towns of Bletchley, Stony Stratford and Wolverton, a number of villages and farmland. The Borough of Milton Keynes also incorporates rural areas north and east of the development area which includes the towns of Newport Pagnell and Olney, Woburn Sands and several other villages.

## Population Densities

Population densities of our area is shown below in Figure 2

Figure 2: Population Densities [Source: CBC, MK, Bedford, 2012]

Area	Population (2010)	Area (km <sup>2</sup> )	Density (Population/km <sup>2</sup> )
Bedford	160,800	475	339
Central Bedfordshire	255,200	718	355
Milton Keynes	241,500	309	782
<b>Whole Area</b>	<b>657,500</b>	<b>1,502</b>	<b>438</b>

## Infrastructure

The M1, A1, East Coast, West Coast and Midland Mainlines are the major transport routes within and across the area (all north-south) with the A5, A6 and A509 (north-south) and A505, A507, A421, A422, A428 and A509 (east-west) being other significant routes.

**See Figure 1**

## Topography

The area is essentially flat though traversed east-west by relatively low, chalk, greensand and clay hills/ridges and river valleys in particular that of the River Great Ouse.

## Corporate Plans

As well as having clear, widespread support from residents and businesses, the delivery of faster broadband is intent and need range of important local corporate and other plans:

- **Bedford Borough's Sustainable Community Strategy** includes seven goals around the Borough being thriving, greener, aspiring, healthy, safer, inclusive and growing, each of which is refined into several aims. Faster broadband is an important albeit implicit rather than explicit tool in support of their delivery. In contrast the Borough Economic Development Strategy clearly identifies the need for widespread Next



Generation Access broadband to foster enterprise, encourage investment and sustain economic growth. Fast broadband can be seen to be important too in the delivery of the Borough Council's own ITC Strategy which seeks the expansion of e-services, virtual meeting/ conferencing, cloud computing, shared services and e-procurement.

- **Central Bedfordshire Council Community Strategy-** The Central Bedfordshire Local Broadband Plan directly supports the Central Bedfordshire's **Corporate Priority** of managing growth effectively with significant potential to support business and jobs growth as part of the Council's plans for future growth. Implementing the Broadband Plan (Leading to the Joint Local Broadband Plan) will also contribute to a range of wider Council objectives including providing and putting in place necessary infrastructure, delivering high quality value services to the residents and the plan will also directly contribute to the educating protecting and providing opportunities for Children and Young People priority. The Central Bedfordshire Local Broadband Plan, supporting the Joint Local Broadband Plan sets out the Next Generation broadband vision for the area by 2015 to deliver Next Generation Broadband infrastructure to 90% of the premises and support provision on a minimum service of 2Mbit/s to all premises in Central Bedfordshire.

In addition to the formally adopted Central Bedfordshire Local Broadband Plan, the Council's adopted (November 2011) **Economic Development Plan** highlights the importance of Next Generation broadband in achieving the Council's growth aspirations As such rolling out Next Generation broadband plan **is a key priority activity within the plan and is also a priority activity within the Council's emerging Medium Term Plan.**

- **Milton Keynes Council's Corporate Plan** sets out the vision for Milton Keynes. It captures what type of place Milton Keynes aspires to be for all those who live, work, learn and visit here. The plan sets out ambitious new objectives for Milton Keynes including achieving world class status for its design, new approaches and technologies and as a sporting city. The overriding objective of the Economic Development Strategy is to maintain, develop and grow economic development activities in Milton Keynes, ultimately leading to a prosperous economy for Milton Keynes as expressed in the Milton Keynes Long Term Economic Vision. The Strategy is built around six key priorities. **Priority 6**, Enabling Infrastructure, has a focus on enabling and contributing to Next Generation Access and improvement in digital infrastructure to businesses and residents

### **A1.3 Broadband infrastructure vision**

The broadband infrastructure vision for our area is to **'Deliver NGA broadband to 90% of premises, with minimum of 2Mbits/s for all by 2015 and move towards NGA broadband for all by 2020.'** We are confident that achieving this vision will deliver our

expected strategic benefits (see Annex B for full details), namely to develop and secure economic growth by:

- Improving business productivity and efficiency
- Supporting sustainable employment
- Strengthening the rural economy
- Supporting local business start-ups and their resilience
- Contributing towards a greener environment
- Promoting equality in the area
- Enhancing education and providing opportunities for children and young people
- Helping the transformation of public services.

The roll out of next generation broadband services underpins our efforts to meeting these objectives and is recognised as a key enabler and priority for our area. This Joint LBP (underpinned by LA match funds in excess of £4 million) has therefore been formally endorsed by all three Council's and its key priorities and objectives are recognised in a range of supporting and related strategies. (See Annex C for evidence of fund allocation)

This joint LBP is supported by the South East Midlands Local Economic Partnership (which encompasses the joint LBP area). SEMLEP has identified the roll out of next generation broadband as a strategic priority. Implementation of this joint LBP will directly support the SEMLEP objective **to facilitate investment in key digital infrastructure to accelerate development across SEMLEP** (South East Midlands plan for growth – April 2012 – March 2013)

#### **A1.4 Expected outcomes of the broadband objectives**

The implementation of this Joint LBP will deliver a number of strategic outcomes. The project team will introduce performance monitoring and evaluation schemes to work with the broadband providers, residents and businesses, to ensure the performance of the broadband network is maintained and sustained. These expected outcomes align with our broadband infrastructure's vision and our strategic context. The expected outcomes are listed below:

**Outcome 1 – Prime locations:** Our areas will become highly attractive, well-connected prime locations for businesses to thrive, and more families will choose our areas as a place to live work and enjoy. We will monitor the general level of satisfaction of residents and businesses through online surveys.

**Outcome 2 – New jobs:** Our areas will secure a substantial number of new jobs, contributing towards the target of 27,000 new jobs in Central Bedfordshire by 2026,

42,000 new jobs in Milton Keynes by 2016<sup>2</sup> and 16,000 new jobs in Bedford by 2021. We will monitor the performance of the local labour market and people's ability to access employment; we will also monitor the employment rate, economic activity and levels of youth unemployment.

**Outcome 3 – Skilled people:** The number of skilled people in our areas will increase. We will monitor the growth in skills, e.g. number of people of working age with NVQ level 1, 2, 3, 4 qualifications, the local opportunities for workers to develop their skills, the number of graduates available to local businesses, and the percentage of people who have received job-related training in the private sector.

**Outcome 4 – Knowledge-based companies:** Increased numbers of knowledge-based, high-growth innovative companies. We will monitor the gross value added (GVA) per year, the growth rate, and GVA per head. We will also monitor the number of business and private-sector investments in the area classified as knowledge-based.

**Outcome 5 – Increased take-up:** Increased levels of take-up of both next generation and basic broadband services for residents and businesses. We will monitor the level of take-up through continuous engagement with local residents and businesses, and through on-going consultation with the broadband providers as part of our efforts to maximise competition in the market and choice for our residents.

**Outcome 6 – Low-carbon economy:** Reduced reliance on transport by residents and businesses, and the development of a low-carbon economy. We will monitor levels of home or flexible working and its impact on related issues such as highways and transportation.

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<sup>2</sup> Calculated as 1.5 jobs per dwelling with a target of 28,000 new houses by 2016

## **A2 Background to the broadband project**

### **A2.1 Summary**

The evidence of need for our broadband project is wide ranging:

- **The Bedfordshire and Luton Business Survey (2011)**, a structured survey of 267 businesses in Bedford Borough found overwhelming support for a plan that everyone could access a minimum standard broadband and most could access Next Generation broadband by 2015
- **The Milton Keynes Broadband Survey (2012)**, The Bedford Citizens Panel Survey (2011), a structured sample of nearly 900 residents across the Borough asked several questions about broadband, the key one being about support for a plan seeking to deliver NGB to 90% of premises and a minimum 2Mbits/s for all which found that 75% of residents supported such a plan and most broadband users (71%) wanted faster broadband
- **The Central Bedfordshire Residents Survey (2011)**, a survey of 1000 local residents seeking views on the local area.

These surveys, the Ofcom report on broadband provision in the UK, data from BDUK, the Commission for Rural Communities report on tackling rural disadvantage, and the findings from broadband analysis by Analysys Mason, all suggest that our areas are currently 'underserved' with broadband provision and will likely remain so until 2015 unless there is significant investment support.

With broadband becoming an increasingly critical 'utility' service, the fact that large numbers of our residents and businesses are underserved or not served at all by the market is an important issue to be addressed in order to achieve the ambition and vision for our areas.

Our broadband project will deliver:

**A minimum of 90% NGA broadband (at least 24Mbit/s) by 2015, and 100% Universal Service Commitment (at least 2Mbit/s) by 2015 across our residential and business premises.**

Our thorough understanding of the current broadband situation in our areas has helped inform our development of this Joint LBP, to ensure we clearly identify the gaps in broadband provision and determine how best to fill these gaps in order to meet our strategic objectives.

## A2.2 Current basic broadband coverage

ADSL remains the most common technology used to provide broadband in our areas. Our analysis of BDUK data shows that nearly 16% of premises in our areas fail to meet the USC target of at least 2Mbit/s. The actual situation may be worse than this due to the way in which access networks are routed, as the performance of ADSL depends on the length of the copper line ('the local loop') between the local serving exchange and the premises. As shown in Figure 3, BT offers ADSL average broadband speeds of 8.7Mbit/s across our residents and business premises. This compares with the national average of 7.6Mbit/s<sup>3</sup>. See Figure A.1 in Annex A for a detailed map showing the distribution of basic broadband speed in our areas.

Figure 3: Performance metrics of current fixed broadband services in our areas [Source: BDUK, 2011]

Local Authority	Total	Less than 2Mbits/s	2-12Mbits/s	Greater than 12Mbits/s	Average downstream speed (Mbits/s)
Milton Keynes	106,496	19,580	45,779	41,137	<b>9.8</b>
%	100%	18%	43%	39%	
Central Bedfordshire	111,868	11,730	74,265	25,873	<b>8.2</b>
%	100%	10%	66%	23%	
Bedford	69,008	13,526	37,032	18,450	<b>7.9</b>
%	100%	20%	54%	27%	
<b>Total</b>	<b>287,372</b>	<b>44,836</b>	<b>157,076</b>	<b>85,460</b>	<b>8.7</b>
%	<b>100%</b>	<b>15.6%</b>	<b>54.7%</b>	<b>29.7%</b>	

### Not spots and slow spots

The 'not' spots are location in our area where there is no broadband i.e. where the speed is zero or less than 56kbits/s and the 'slow' spots are locations where the broadband speed is greater than 56kbits/s but less than the 'USC' 2Mbits/s. Figure A.2 in Annex A for a detailed map showing the current broadband services in our areas showing 'slow spot' and 'not spot' locations.

Figure 4: Performance metrics of current broadband services in our areas showing 'slow' spot and 'not' spot locations [Source: Analysys Mason, BDUK, 2011]

Local Authority	Total premises	'Not' spot premises	'Slow' spot premises
Milton Keynes	106,496	1,408	18,172
%		1%	17%
Central Bedfordshire	111,868	2,271	9,459

<sup>3</sup> [http://stakeholders.ofcom.org.uk/market-data-research/telecoms-research/broadband-speeds/bb-speeds-nov-11?utm\\_source=updates&utm\\_medium=email&utm\\_campaign=bb-speeds-nov-11](http://stakeholders.ofcom.org.uk/market-data-research/telecoms-research/broadband-speeds/bb-speeds-nov-11?utm_source=updates&utm_medium=email&utm_campaign=bb-speeds-nov-11)

%		34%	25%
Bedford	69,008	3,098	10,428
%		46%	27%
<b>Total</b>	<b>287,372</b>	<b>6,777</b>	<b>38,059</b>
%	<b>100%</b>	<b>2%</b>	<b>13%</b>

The BDUK findings presented above are reinforced by various other evidence-based data, as summarised in Figure 5 below.

Figure 5: Performance metrics of fixed broadband services in our area [Source: Various, 2012]

Evidence source	Details	Details
CRC	CRC report on tackling rural disadvantages	According to the CRC report, there are a number of areas in <b>Milton Keynes, Central Bedfordshire</b> and <b>Bedford</b> where ADSL services are likely to fall short of the 2Mbit/s USC. To view the map see page 31 of: <a href="http://www.samknows.com/broadband/uploads/CRC.pdf">http://www.samknows.com/broadband/uploads/CRC.pdf</a>
Central Bedfordshire Resident survey (2011)	<b>Central Bedfordshire</b> residents survey from 6 September 2011 to 7 October 2011. 4,000 addresses were contacted, with 1,129 responses	15% of the respondents do not have access to broadband services (Internet)
Bedfordshire and Luton Business Survey (2011)	Business survey conducted in June 2011. 885 interviews were completed across <b>Bedfordshire</b> . <sup>4</sup> 327 were completed in Luton.	50% of businesses said they experience basic broadband between 2-20Mbit/s and a further 10% fall short of the 2Mbit/s USC. The proportion without broadband rises to 15% among businesses in wholesale and retail.

<sup>4</sup> Bedfordshire refers to Central Bedfordshire and Bedford

Evidence source	Details	Details
Bedford Citizens Panel Broadband report	Results of a survey sent to all 887 panel members in June 2011. 502 responses were received.	<ul style="list-style-type: none"> <li>8% of the respondents said the service they receive falls short of the 2Mbit/s USC</li> </ul>
MK Broadband Survey	Broadband survey of 1400 residential responses and 118 businesses. Available at: <a href="http://www.miltonkeynes.gov.uk/mkgrowth/displayarticle.asp?ID=84172">http://www.miltonkeynes.gov.uk/mkgrowth/displayarticle.asp?ID=84172</a>	<ul style="list-style-type: none"> <li>87% of business respondents have less than 8 Mbit/s and a further 54.2% fall short of the 2Mbit/s USC</li> <li>92.2% of resident respondents have less than 8Mbit/s and a further 56.6% fall short of the 2Mbit/s USC</li> </ul>

### A2.2.1 Basic broadband: Black-Grey-White analysis

In line with paragraph 77 of the Community Guidelines for the application of state aid rules in relation to rapid deployment of broadband networks which references ADSL/VDSL and cable networks as competing network infrastructures, the two competing network infrastructures in our areas are owned by BT (ADSL/VDSL network) and Virgin Media (cable network). We have employed the EC definition of basic black, basic grey and basic white (BGW) premises in relation to funding eligibility as follows:

- **Basic black:** premises in areas where more than one operator own network infrastructure; not eligible for grant funding
- **Basic grey:** premises in areas where one operator owns network infrastructure; not eligible for grant funding
- **Basic white:** premises with no service or less than 2Mbit/s; eligible for grant funding.

Figure 6 below shows a breakdown of basic-white, basic-grey and basic-black premises in our areas. Figure A.3 in Annex A for a detailed basic BGW map of our areas, for state aid purposes.

Figure 6: Breakdown of basic BGW premises in our areas [Source: Analysys Mason, BDUK, 2012]

Local Authority area	Total	Basic black	Basic grey	Basic white
Milton Keynes	106,496	825	86,554	19,117
%	100%	1%	81%	18%
Central Bedfordshire	111,868	64,641	37,361	9,866
%	100%	58%	33%	9%

Local Authority area	Total	Basic black	Basic grey	Basic white
Bedford	69,008	47,158	14,611	7,239
%	100%	68%	21%	11%
<b>Total</b>	<b>287,372</b>	<b>112,624</b>	<b>138,526</b>	<b>36,222</b>
%	<b>100%</b>	<b>39.2%</b>	<b>48.2%</b>	<b>12.6%</b>

### A2.3 NGA broadband coverage

Our areas are currently provided with NGA broadband by the two main competing infrastructure operators in the UK: BT and Virgin Media. Below we provide an analysis of the coverage of NGA broadband in our areas: this includes the future plans of these operators, insofar as these are known.

#### A2.3.1 NGA coverage by BT

According to analysis of BDUK data undertaken by Analysys Mason, BT provides coverage to around 63.4% of premises in our areas. This estimate is based on the assumption that each serving exchange will only reach 85% of the premises in its exchange area. This number compares with BT's announced plan for commercial roll-out to two-thirds of premises in the UK as a whole by 2015. The NGA-enabled exchanges will provide two main services, with downstream speeds of up to 40Mbit/s and 100Mbit/s. These speeds are expected to increase during 2012.

The Openreach website, accessed on 12 December 2011, lists the exchanges serving our areas that will be upgraded. A number of these exchanges are themselves located outside our areas, but serve premises within these areas. One significant exchange is the Bradwell Abbey exchange, which is planned to be upgraded in 2012 to use mainly fibre-to-the-premises (FTTP) delivering NGA broadband to nearly 30,000 premises in our areas. This is one of the largest exchanges in the UK. See Figure A.4 in Annex A for a detailed map of the BT coverage in our area.

Figure 7: BT NGA coverage by 2015 [Source: Ofcom and BDUK, 2012]

Local Authority area	Total in the area	Coverage	Percentage coverage
Milton Keynes	106,496	35,271	72.2%
Central Bedfordshire	111,868	69,966	62.5%
Bedford	69,008	76,871	51.1%
<b>Total</b>	<b>287,372</b>	<b>182,108</b>	<b>63.4%</b>



### A2.3.2 NGA coverage by Virgin Media

According to Ofcom, Virgin Media's digital cable network covers 51% of premises in the UK. However, the operator has a poor footprint in our areas, covering just 39.6% (113,920) of premises. This low figure is due to the almost zero NGA coverage footprints in Milton Keynes, as shown in Figure 8 below. In Milton Keynes the cable network is 100% analogue, and Virgin Media has not announced any plans to upgrade it to digital. (The cable network infrastructure in Milton Keynes is actually owned by BT, which has a contract with Virgin Media to provide service.) Virgin Media's NGA coverage is concentrated in the more densely populated areas of Central Bedfordshire and Bedford where the business case is viable for the operator.

Virgin Media has not announced any plan to extend its footprint in our areas, and we do not expect any major improvements in coverage by 2015. The digital network provides headline speed up to 100Mbit/s, and it is planned to deliver up to 200Mbit/s in the near future. See Figure A.5 in Annex A for a detailed map of Virgin Media NGA coverage of our areas.

Figure 8: Virgin Media NGA coverage [Source: Ofcom and BDUK, 2012]

Local Authority area	Total in the area	Coverage	Percentage coverage
Milton Keynes	106,496	848	0.8%
Central Bedfordshire	111,868	65,164	58.3%
Bedford	69,008	47,908	69.4%
<b>Total</b>	<b>287,372</b>	<b>113,920</b>	<b>39.6%</b>

### A2.3.3 NGA broadband: Black-Grey-White analysis

Based on the data on the NGA operators described above, Analysys Mason undertook BGW analysis of the NGA coverage in our areas, currently and by 2015. As for basic broadband, this analysis has employed the EC definition of NGA black, grey and white (BGW) premises, as follows:

- **NGA black:** premises in areas where two or more NGA operators exist now, or are planned to exist by 2015; these need strong reasons for grant funding.
- **NGA grey:** premises in areas where one NGA operator exists now, or is planned to exist by 2015; these need strong reasons for grant funding.
- **NGA white:** premises in areas where no NGA operator exists now, or is planned to exist by 2015; these are eligible for grant funding.

Figure 9 below shows the breakdown of the black, grey and white NGA coverage in our areas by 2015. Figure 10 breaks down these further for the white intervention areas, showing the split between (a) urban, suburban and rural premises, and (b) residential and

business premises. See Figure A.6 in Annex A for a detailed map of the BGW areas for 2015.

Figure 9: Breakdown of NGA BGW premises in our areas by 2015 [Source: Analysys Mason, BDUK, 2012]

Local Authority area	Total	NGA black	NGA grey	NGA white
Milton Keynes	106,496	519	76,706	29,271
%	100%	0.5%	72.0%	27.5%
Central Bedfordshire	111,868	52,521	30,088	29,259
%	100%	46.9%	26.9%	26.2%
Bedford	69,008	30,619	21,916	16,473
%	100%	44.4%	31.8%	23.8%
<b>Total</b>	<b>287,372</b>	<b>83,659</b>	<b>128,710</b>	<b>75,003</b>
<b>%</b>	<b>100%</b>	<b>29.1%</b>	<b>44.8%</b>	<b>26.1%</b>

Figure 10: Breakdown of residential/ business and urban/rural premises for the White intervention area by 2015 [Source: Analysys Mason, 2012]

Local Authority	Urban	Suburban	Rural	Residential	Business	Total
Milton Keynes	4,627	24,644	0	28,280	991	29,271
%	84.19%	15.81%	0%	96.6%	3.4%	—
Central Bedfordshire	7,962	20,433	864	28,137	1,122	29,259
%	27.2%	69.8%	3%	96.17%	3.83%	—
Bedford	0	16473	0	15,584	889	16,473
%	0%	100%	0%	94.6 %	5.4%	—
<b>Total</b>	<b>12,589</b>	<b>61,550</b>	<b>864</b>	<b>72,001</b>	<b>3,002</b>	<b>75,003</b>
<b>%</b>	<b>16.78%</b>	<b>82.06%</b>	<b>1.16%</b>	<b>96%</b>	<b>4%</b>	<b>—</b>

## A2.4 Mobile broadband coverage

Mobile broadband is currently used to complement fixed broadband in our areas and is currently offered by all four UK mobile network operators. The mobile market in our areas has experienced a rapid increase in take-up since 2008. There is a high level of competition between the mobile operators in the region, leading to a decline in the price of mobile services.

3G coverage in our areas is largely confined to the larger towns, with little or no mobile broadband coverage in the rural parts. The 2G and 3G mobile coverage in our areas is shown in Figure 11 below, based on data in a recent Ofcom report.<sup>5</sup>

<sup>5</sup> <http://stakeholders.ofcom.gov.uk/binaries/research/telecoms-research/bbspeeds2011/infrastructure-report.pdf>

Figure 11: Geographical coverage by 2G and 3G in our areas [Source: Ofcom, 2011]

Local Authority area	2G coverage	3G coverage
Milton Keynes	99.5%	46.7%
Central Bedfordshire	97.9%	40.1%
Bedford	97.8%	27.1%

We currently do not have information on operators' plans for increasing mobile broadband provision in our area, however our prediction is that mobile broadband take-up among our residents and businesses will continue to rise in the short term.

## A2.5 Broadband competition

In the UK, the regulatory framework encourages competition in the telecoms market by allowing rival operators to compete with BT by 'unbundling' the copper access lines from BT's local exchanges. Through this arrangement, known as local loop unbundling (LLU), fixed operators can offer their services over BT's lines. Within our areas, there are currently about 72 BT telephone exchanges, and around 58% of them offer some level of infrastructure competition through LLU. The statistics in Figure 12 below show that the vast majority of our areas have more than one LLU operator offering broadband services (92% of all premises are served by LLU operators). This indicates a good level of broadband competition within the region. Figure A.7 in Annex A for an LLU distribution map of the area.

Ofcom's indicates that Milton Keynes has 78% take-up of broadband<sup>6</sup> as at 2011, and Central Bedfordshire and Bedford both have 73% take-up. This high level of take-up suggests an attractive market for any future broadband investment in our area, and compares well with the national average of 74%.

Figure 12: Distribution of LLU operators in our areas [Source: Analysys Mason, BDUK, 2011]

Local Authority area	No LLU operator	1-2 LLU operators	3-5 LLU operators	More than 5 LLU operators
Milton Keynes	2756	6,942	0	96798
%	3%	7%	0%	91%
Central Bedfordshire	10852	31,197	32385	37434
%	10%	28%	29%	33%
Bedford	8191	4885	12526	43,406

<sup>6</sup> Note that the broadband take is the average take-up of basic broadband. Next generation Broadband and mobile broadband

%	12%	7%	18%	63%
<b>Total</b>	<b>21799</b>	<b>43024</b>	<b>44911</b>	<b>177638</b>
%	8%	15%	15%	62%

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### **A2.5.1 Broadband pricing and usage**

Our broadband survey exercise suggests that the average spend on broadband Internet access in our areas is between GBP16 and GBP20 per month for residential customers and between GBP31 and GBP50 for business customers.

### **A3 Local broadband context: evidence of need and gap analysis**

#### **A3.1 Summary**

The Digital Agenda for Europe sets the target that, by 2020, all EU citizens will have access to fast broadband of at least 30Mbit/s, and 50% or more of European premises will access broadband at speeds above 100Mbit/s. The UK Government also has ambitious plans for the country to have the best broadband network in Europe by 2015, with at least 90% NGA coverage by 2015, and all premises having access to a minimum of 2Mbit/s.

The demography, topography, economic and social profile of our areas, combined with the scale of investment and uncertainty of the business case to deploy broadband networks to the challenging parts of our region, mean that it will be impossible to achieve the objective of the UK Government and the European agenda without public investment.

The results of our demand registration survey exercises (see section B) suggest that we need a reliable, faster and secure broadband network to meet and sustain economic growth. The surveys asked about broadband availability in our areas, and the impact this will have on achieving the strategic requirements of our partner authorities.

#### **A3.2 Evidence of gaps**

##### **A3.2.1 Demography, topography and economic profile**

Our areas have a challenging population profile and topography (though not in a vertical sense), which act as barriers to the development of improved broadband infrastructure and services in our region. Large parts of our areas are predominantly rural, i.e. sparsely populated. For example, over half of Central Bedfordshire's population lives in rural areas while 35.8% of Bedford's is spread across 45 rural parishes. Even in Milton Keynes the ratio of urban to rural areas is only a little more than 2:1. This degree of rurality significantly increases the cost of providing broadband infrastructure. Analysys Mason analysis compared the proportion of urban and rural premises in our area to the national average.<sup>7</sup> The result shows that we have a low proportion of urban premises and a significant proportion of suburban and rural premises.

Overall, our areas have a relatively successful economy with associated high levels of employment. However, there have been clear increases in the unemployment rate in some parts of our areas. For example unemployment in Central Bedfordshire rose from 1.1% in April 2008 to 3.1% in April 2009. This figure has since stabilised and unemployment was recorded at 2.9% in April 2010 (4,647 people), compared to 4.1% for

<sup>7</sup>

The analysis is based on the BSG fibre cost modelling study, which considers factors including population density, the number of lines connected to an exchange and the distance of premises to an exchange. The analysis is taken at a postcode level.

England. However, at December 2011 the unemployment rates for Milton Keynes (3.8%) and Bedford (3.9%) were still above their regional comparators, and were at or above the national (GB) rate. The same is true for the rates of long-term unemployment.

These figures highlight the need for investment in sustainable broadband infrastructure to attract business investment across our areas and create employment for and develop the employability skills of our citizens.

### **A3.2.2 Private Telecoms assets**

The current provision of basic and NGA broadband infrastructure in our areas was detailed in Section A2. The market is dominated by BT and Virgin Media, though there are also a number of LLU players, leading to healthy competition. The number of unbundled exchanges has grown significantly over the past five years, helping to drive down the price of broadband services. Nevertheless, based on the analysis carried out by Analysys Mason (see Section A2), our areas still fall well short of the broadband requirements to meet the strategic objectives of our partner authorities.

### **A3.2.3 Public sector networks and assets**

Our existing public sector assets include the extensive wireless broadband schools network owned by Milton Keynes (licensed 5.4MHz and 5.8MHz) with backhaul via the Open University and Janet, Central Bedfordshire's MPLS corporate wide area network (WAN) provided by Virgin Media, with support for an educational WAN to 135 schools and Bedford Borough Council's corporate and education network which is an MPLS system utilising local loop unbundling within the BT exchange provided by Updata, offering services to 85 schools, 25 corporate sites, 2 magistrate courts (Bedford and Luton), Dunstable Town Council and Bedfordshire Libraries. Internet access is provided by JANET. At this stage of the plan, we are not intending to utilise the assets as part of the LBP.

## **A4 Scope of project**

### **A4.1 Summary**

**Central Bedfordshire, Bedford Borough and Milton Keynes Council's** have ambitious plans to support the strategic vision and objectives for the region. Providing high-speed NGA connectivity is recognised as a key requirement, and there is a pressing need to support those communities with no access or limited access to improved broadband in an **area which currently has no community Broadband Hubs**. Our broadband project will involve direct intervention to bring NGA broadband to 3,233 post-codes in our area by June 2015, covering 49,698 residential and 1,892 business premises that under current commercial plans would not have access to NGA broadband. The project will also ensure that all premises in our areas have access to at least 2Mbit/s broadband speed by 2015.

We propose to deliver this plan using the BDUK procurement framework and state aid approval to secure a private sector provider, and seek a minimum 100% match funding of any public sector funds. Our desire as a partnership is to move forward with the procurement of a provider and roll-out of infrastructure at the earliest opportunity. It is estimated that, utilising the BDUK framework, a private sector provider could be contracted in towards the end of 2012 at the earliest.

A detailed infrastructure delivery plan will be developed by the private sector provider during the procurement process. This would be open access infrastructure, and would be technology-neutral, though we would expect fibre-optic infrastructure to be a significant component of any solution. We would seek, as a minimum; a technical solution based on fibre-to-the-cabinet (FTTC) and will aspire to extend this fibre to the premises (FTTP) where possible. We will consider alternative technologies, particularly for the 10% of premises not receiving an NGA solution, and in order to achieve the USC objective. We will actively seek innovative and future-proofed solutions from our chosen private sector provider.

### **A4.2 Broadband objectives**

The following objectives have been set for the broadband project in the short and long term in light of the current and forecast broadband infrastructure supply and demand, the Government's targets and the EC state aid requirements;

#### **Short-term objectives**

- Provide NGA broadband (at least 24Mbit/s) to at least 90% of premises in the Bedford and Central Bedfordshire areas, and to 95% in the Milton Keynes area by 2015. The technology should be future-proofed, innovative, cost-effective and flexible for upgrade.

- Deliver improved basic broadband (at least 2Mbit/s) to all premises in our areas by 2015. The basic broadband service should be reliable, robust and future-proofed using a cost-effective solution.
- Increase competition between broadband providers, in line with the need to support the effective operation of the market.

### **Long-term objectives**

- Deliver NGA broadband to all premises in our areas by 2020 in line with the Digital Agenda for Europe, i.e. 50% receiving a minimum of 100Mbits/s. The technology should be future-proofed, innovative, cost-effective and flexible for upgrade.

### **A4.3 Geographical and coverage scope of the broadband project**

As stated above, the project will ensure all premises in our areas (Bedford Borough Central Bedfordshire and Milton Keynes local authority areas), receive broadband coverage (minimum 2Mbit/s) by 2015, and at least 90% of premises receive NGA broadband coverage.

### **A4.4 Project prioritisation**

The broadband project will target key areas for prioritised deployment, within the context of maximising total roll-out. The priority area will vary for each partner authority, depending on a number of factors including the strategic objectives of the authority, existing local broadband initiatives, existence of strategic locations such as major employment and industrial sites, and opportunities to re-use public infrastructure. We will continuously engage with stakeholders in our areas (including businesses and community group representatives) to inform the decision on priority areas.

Priorities for Bedford Borough are to maximise the additional number of premises to which NGA broadband is delivered subject to a requirement that Bedford's town centre and its five major business parks/industrial estates have NGA access (Elms and Viking Industrial Estate, Woburn Road Industrial Estate, Priory Business Park, Manton Lane Industrial Estate, Cambridge Road Industrial Estate).

Priorities for Central Bedfordshire are to maximise the total level of rollout within the area and to provide maximum flexibility to local communities and businesses that may wish to undertake local activity to support roll out. The Council and its local partners will continue to work with industry to identify priorities through the procurement process, to ensure that benefits to local residents and business are maximised.



Milton Keynes Council wishes to maximise total rollout within its boundary, whilst ensuring flexibility to target resources at opportunity areas arising through on-going engagement with local communities, industry and alignment with other council initiatives.

## **SECTION B – CUSTOMER AND COMMUNITY ENGAGEMENT**

### **B1 Existing initiatives and engagement activities**

We recognise that there are number of existing initiatives that can help the delivery of our broadband project and we have considered these during the development of the Joint LBP. This has included in particular those activities concerning demand stimulation and other complementary activities. The partnership board will co-ordinate the existing initiatives to ensure there is a common approach to the delivery of the broadband plan. Examples of these activities include the following:

- Regular local public meetings on issues defined as relevant by our communities. For example, Central Bedfordshire Council “Let’s Talk” events and campaigns such as Bedford’s ‘Pints in the Parishes’ and Milton Keynes’ ‘Race Online 2012 – Give an Hour’.
- Market research – qualitative and quantitative techniques are used with all audiences.
- Social networking is used to engage as well as to inform. The partner authorities are active on Twitter and Facebook; in addition, Central Bedfordshire has its own social network site “Let’s Talk Central” and Milton Keynes has a “My Local Broadband” site.
- The councils’ enhanced websites are the preferred access channel for many customers and the councils are committed to greatly increasing online engagement.
- Regular meetings with groups such as Town and Parish Councils and also with business groups, to strengthen connections with the commercial sector and with local strategic partnerships.

Full list provided below for each local authority

#### **Initiatives for Milton Keynes**

Two years ago, Milton Keynes Council (MKC) established a Digital Infrastructure Programme (now known as the Broadband Delivery Programme). The main work areas are Access, Stakeholder Management, and Digital Inclusion (Take-up or Connectivity):

##### *Access*

- On-going discussions with Telco providers
- On-going discussions with developers regarding broadband and other utilities
- Planning for NGA broadband

*Digital inclusion*

- Race Online 2012 – Give an Hour campaign
- Supporting the EGOV4U (Official partner in the e-Government initiative)
- BDUK Demand Stimulation
- Milton Keynes Broadband Survey
- NGA Education and Demand Stimulation (MKC and Openreach)
- My Local Broadband – MKC's website on broadband providing information and updates.

*Stakeholder management*

- MK Broadband Stakeholder Group
- My Local Broadband – MKC's website and email enquiries
- Next Gen Road show (May 30 2012)
- Parish Council consultations
- Business meetings and local events.

**B1.2 Initiatives for Central Bedfordshire**

- MKSM broadband working group to investigate the potential for circa 100Mbit/s roll-out
- Adopted Central Bedfordshire Local Broadband Plan leading to the Joint Local Broadband Plan
- Emerging Planning policy to support roll out of next generation broadband infrastructure
- EEDA EREBUS demand registration scheme
- Central Bedfordshire demand survey and registration scheme  
[www.centralbedfordshire.gov.uk/broadband](http://www.centralbedfordshire.gov.uk/broadband)
- Promoting digital champions in the community, and Race Online initiatives
- Bedfordshire and Luton Business Survey
- Central Bedfordshire Broadband Partnership
- On-going liaison with telecoms industry to promote commercial rollout plan

**B1.3 Initiatives for Bedford**

- Bedfordshire and Luton Business Survey

- Bedford Citizens Panel Survey
- Discussions with suppliers on range of products/ technologies
- Initial Consultation on Improving Broadband
- Demand registration facility
- Regular broadband newsletter
- Promotion of national Digital Champion scheme
- Trial of satellite broadband
- Initial stages of business growth broadband project

We have used all of these opportunities to engage with residents and businesses, to ensure we build a local broadband plan that delivers added value to our citizens. We are continually engaging with the residents and businesses in our areas in order to understand their broadband needs and issues, and give them a greater involvement in the decision-making process of the broadband project. Further to this, the councils have launched extensive demand registration programmes, and are promoting digital champions in the area to encourage the take-up of broadband services.

We have carried out a wide range of consultation activities with businesses and the wider community. These provide opportunities to influence decisions on the broadband project, by strengthening the link between project decision-makers and local people. We want to give our residents and businesses a greater role in deciding how the project should be delivered in their areas; appropriate to the local issues around broadband provision.

## **B2 Demand stimulation**

There will be a particular need to ensure that businesses and residents benefit from the broadband project, hence promoting the demand for services delivered by NGA broadband will be an important consideration for the partners. In addition to the activities already undertaken by the partner authorities, a range of high level communications to ensure local residents, business and communities are aware of initiatives to support broadband, these include the local surveys noted above but also a number of press campaigns, such as through the Lets Talk Central magazine, sent to all residents in Central Bedfordshire.

### **B2.1 Future plan for demand stimulation**

Future activities to stimulate demand will include testing marketing and communications methods in the early stage of the project to reach the areas of market intervention (the NGA white areas). This will include **bidder days** to make providers aware of local conditions and opportunities, supporting local supply chain opportunities, events such as hosting NextGen in Milton Keynes to promote partners plans and the development of a

joint communications plan. We will work to develop local broadband champions, **working directly with suppliers and community organisations** to advocate the best approach to the local promotion of broadband services. We will primarily target residents and businesses in areas of currently low take-up. We will seek to utilise best practice emerging from the rollout of Next Generation broadband around the delivery and evaluation of demand stimulation.

Through the procurement process we will seek to bring innovation and engagement of the commercial sector in stimulating take up.

## **B2.2 Funding and delivery of demand stimulation**

Activities in the demand stimulation programme will be carried out in partnership with the preferred supplier, based on the project's service level agreement and the available revenue funding. The full details of the activities will be discussed and agreed during the procurement phase, but as a minimum will include the following;

- Working with local businesses on demand aggregation activities to further raise the commercial viability of roll-out schemes.
- Promoting supply chain opportunities for local providers of services
- Use of existing demand registration activities (survey data and dedicated websites) and opportunities to stimulate the roll-out of NGA.
- Promotional campaigns through Council and partner media channels.
- Use of existing master planning and planning policy initiatives to support the roll out of the NGA broadband project, including developing best practice for planning and development management teams, to ensure that Next Generation broadband is considered from the start of development.
- Supporting residents and business with accessing Next Generation broadband services, through delivering ICT training initiatives.

The partners are investigating a number of funding sources (in addition to funding already identified) to support the demand stimulation activities and actual take-up and use by businesses for business growth, including funding from the European Regional Development Fund (ERDF). The partners are considering the alignment of this funding with the broadband plan.

Further to this, partners will actively seek from the chosen private sector provider a range of demand stimulation activities to be resourced through their core marketing and operating activity. This could include, but not exclusively:

- local demonstrators

- marketing plan including launch events and business seminars
- community engagement – including training for local community champions

### **B3 Demand Registration**

We have launched a number of demand survey exercises in each authority to better understand the nature and importance of broadband provision to our residents and businesses. This exercise is being conducted through our **public-facing websites, via targeted paper-based surveys, and through our libraries networks**. The evidence gathered from these demand surveys will help further demonstrate the real local demand for broadband services among our residents and businesses. We will capture information such as the level of demand for NGA services, the expected benefits of NGA and the level of interest in improved broadband provision. The outputs from our demand survey exercise will inform our engagement with bidders during the procurement stage.

#### **B3.1 Methodology and evidence of Demand registration**

The broadband surveys provide evidence of the current availability of basic broadband and NGA broadband in our areas (see Section A2 and A3 above). Our past engagement with residents and businesses includes the following.

##### **Bedfordshire and Luton Business Survey 2011**

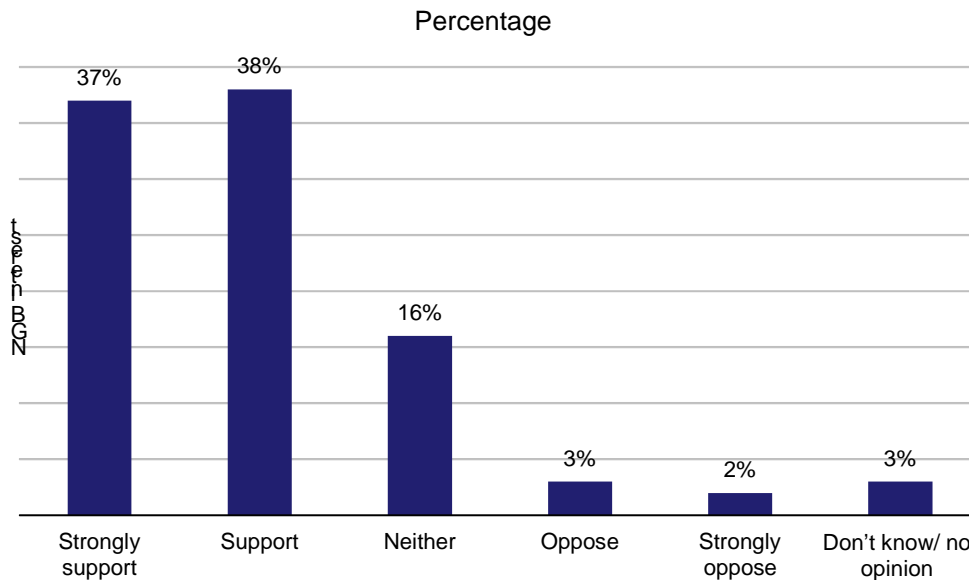
An annual structured (by company size and sector of operation) survey covering over 550 business by telephone and online questionnaire in Bedford and Central Bedfordshire. The survey was independently undertaken on behalf of the councils and found:

- 88% of local business respondents stated they would support a project to roll out next generation infrastructure in Central Bedfordshire.
- 85% of Bedford businesses stated they would support (mostly strongly) a plan to provide a minimum of 2Mbit/s for all, and Next Generation broadband (greater than 24Mbit/s) for most by 2015.

##### **Bedford Citizen's Panel Survey**

Bedford Borough's Citizen's Panel is nearly 900 strong. The summer 2011 Survey of panel members asked several questions about broadband including support for a plan seeking to deliver Next Generation broadband to 90% of premises and a minimum 2Mbits/s for all. The graph below in Figure 13 illustrates this key finding:

Figure 13: NBED Title [Source: Analysys Mason, 2012]



Our partners are currently engaging with local residents and businesses, and this will continue leading to the procurement phase. The on-going demand registration activities include:

#### **Bedford Broadband Consultation (on-going)**

- Bedford Borough Council has undertaken an initial consultation and has an on-going broadband demand registration survey for business, residents and community organisations. These are available on the Council's website.<sup>8</sup>

#### **Milton Keynes Broadband Survey**

- 95% of residents in Milton Keynes want Next Generation broadband. These were some of the findings from the broadband survey completed by 1,489 people between July 2011 and Jan 2012 to find out how residents use broadband currently and if there is a demand for the new Next Generation Broadband service that offers speeds in excess of 24Mbits/s. Although residents say they wish faster speeds, half of those surveyed say they were still experiencing speeds of 2Mbits/s or less with most others (40%) receiving between 2Mbits and 7Mbits/s.

8

[www.bedford.gov.uk/broadband](http://www.bedford.gov.uk/broadband)

- Business in Milton Keynes reported that most (86%) received speeds of 8Mbits or less, with 64% of firms unaware of any Next Generation Broadband service in the area, according to the survey aimed at companies in the borough. Out of the 118 businesses that responded to the survey 99% said they wanted Next Generation broadband.

### **Central Bedfordshire Broadband Consultation (on-going)**

Central Bedfordshire has started an initial consultation and a demand registration survey, available on the Council's website.<sup>9</sup> As of March 2012 over 1600 responses had been received. Initial results suggest that:

- Reliability of current Internet service is an issue in the Central Bedfordshire area. 59% of respondents rate the reliability of their service as bad, while only 15% are satisfied with their current broadband performance.
- 98% of respondents support the provision of NGA broadband, with a strong indication that it will be taken up when it becomes available (96% state that they will take up NGA services).
- 73% of business respondents indicate that the future location of their business would be influenced by the availability of broadband. They also state that the performance of their business is restricted by their current broadband.

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<sup>9</sup> <http://www.centralbedfordshire.gov.uk/broadband>



### **B3 Stakeholders**

Our commitment to engaging with stakeholders is evidenced by the development of the Joint Broadband Program Board (JBPB). Their terms of reference for this are attached in Annex D (See Annex C for evidence of support from our internal stakeholders). Further to this each local authority partner has also developed local engagement groups, to ensure local residents, through parish councils, businesses, through Local Chambers of Commerce and the Federation of Small Businesses, education providers, rural representatives, social and voluntary sector representatives and older people's representatives have all been engaged.

The councils are continuing to engage with a range of stakeholders in the community, for example through attending Parish Council events, to ensure we are able to deliver the expected outcomes of the broadband project. Our stakeholders' engagement will also ensure we communicate clearly the strategic benefits of our broadband project to businesses and residents in our area.

We regularly meet with our local strategic partnerships, public partners, and town and parish councils, where we share and discuss ideas including those detailed in this JLBP. We also regularly meet with BDUK representatives to discuss and understand any issues that could potentially affect the delivery of this plan. Our stakeholder engagement will be reviewed regularly to ensure that we target the delivery of our objectives effectively and efficiently.

#### **B3.1 Business stakeholders**

Key stakeholders in this group include the Bedfordshire and Luton and Milton Keynes Chambers of Commerce, the Federation of Small Businesses, the Bedfordshire and Luton Business Ambassadors and other groups. Likewise, through the councils' engagement with individual local businesses we are keeping them up to speed with project developments.

#### **B3.2 Community stakeholders**

In addition to the membership of the partnership board, the councils have promoted the project through local events to discuss and promote local issues for example Central Bedfordshire's 'Let's Talk' events and Bedford's 'Pints in the Parishes' events. These have been well attended by our communities. Further to this, we have engaged with the networks of our town and parish councils to ensure their input and support for the project.

#### **B3.3 Public sector stakeholders**

In addition to partnership board membership we engage with public partners including the Police, Fire Service, and Jobcentre Plus to promote the project. This is done both

informally and formally, e.g. through our Local Strategic Partnerships (LSPs): Central Bedfordshire's LSP and Bedford's LSP have provided capital contribution for the local authority funding of the broadband plan.

Partners have and will continue to engage with local Members of Parliament to build on their support for the roll out of Next Generation broadband to the area.

## SECTION C – FINANCIAL INFORMATION

### C1 Funding requirements

Our objective is to deliver universal broadband coverage to all premises and NGB coverage to at least 90% of premises in our areas. This will be achieved through a competitive tender process to seek investment from the private sector, to supplement available public sector funds.

Figure 14 identifies the capital funding requirement, and availability, to deliver on our broadband targets. It should be noted however that the partners in the project will continue to seek additional resources from e.g. Parish Councils, BDUK, to ensure delivery and indeed deliver over and above our current targets.

Figure 14: Funding available for the project

Total funding required (GBP millions)	Total	2012/2013	2013/2014	2014/2015	2015/2016
Private sector investment (telecoms companies)	5.17		3.10	2.07	
<b>Sub Total</b>	<b>5.17</b>		<b>3.10</b>	<b>2.07</b>	
BDUK funding	1.20		0.72	0.48	
Other funding (Local Authority/PCT)	4.04		2.42	1.62	
<b>Sub Total</b>	<b>5.24</b>		<b>3.14</b>	<b>2.10</b>	
Other funding (European/ERDF)	–		–	–	
<b>TOTAL</b>	<b>10.41</b>		<b>6.24</b>	<b>4.17</b>	
Number of postcodes covered by the funding	<b>3,233</b>				
Number of premises (residential and non-residential) covered by the funding			Number of residential premises =		
			<b>49,698</b>		
			Number of business premises =		
			<b>1,892</b>		

## C2 Funding structure

Analysys Mason have carried out a detailed cost modelling to help determine the cost of deploying different technology mixes to deliver broadband solutions to our area and the appropriate level of funding required to deliver the levels of coverage to meet our project objectives, taking into account BDUK funding allocation and cost viability.

Analysys Mason have developed similar models to support a number of successful Local Broadband Plans including Devon and Somerset LBP, Lincolnshire LBP and Wales LBP. The inputs and assumptions in the model are adapted from Analysys Mason's fibre cost model developed for Broadband Stakeholder Group (BSG)<sup>10</sup>, the BDUK data points provided to us, and the available information we have from broadband operators (specifically on existing broadband providers in the area).

The Analysys Mason model takes into account coverage information, take-up rates, and network cost elements of a broadband network to derive the expected public-private sector contribution for different levels of coverage and performance. The model used a geotyping approach, which divides the UK into 'cost of deployment' geotypes at a postcode level. The analysis shows that we should be able to achieve our individual partner broadband objectives using a predominantly FTTC solution for a cost of **GBP9.40 million**.

BDUK has allocated **GBP1.2 million**, and the partner authorities have more than quadrupled this allocation, giving a total public sector funding of **GBP5.24 million** (See Annex C for individual approval letters from each local authority). Analysys Mason estimates that there will be a contribution of GBP5.17 million from private sector investment, bringing the total funding and investment to **GBP10.41 million**.

Thus, there is around GBP1 million available for technologies that are better performing than FTTC and for meeting the Universal Service Commitment of 2Mbit/s for all premises.

The project will be adopting a gap-funded approach, as described in Section D1. Accordingly, we propose that the ownership, operation and maintenance of the network will reside with the private sector partner.

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<sup>10</sup> The cost of deploying fibre based next generation broadband (<http://www.broadbanduk.org/content/view/66/50/>)

## SECTION D – COMMERCIAL INFORMATION

### D1 Commercial case

The partner authorities have considered all available options to deliver this project, and decided to adopt the gap-funded option because of the following benefits, to name a few:

- The level of initial public intervention funding is minimised.
- The network ownership and operational risks are transferred to the private sector.
- The public sector is not exposed to financial losses.
- The financing arrangements are less complex.
- The claw-back mechanism prevents 'excess profits' being made by the private sector.

### D2 Market engagement

The partner authorities have historically engaged with telecoms infrastructure providers in order to determine current broadband investment and any future roll-out plans for broadband provision in the area. In line with the new state aid requirements, the authorities will undertake additional market consultation for one month prior to commencement of the procurement exercise, to maximise awareness of the JLBP and to ensure that any additional broadband roll-out plans are identified.

The partners have historically engaged with a range of telecoms infrastructure and service providers to support local roll out. In order to ensure that market awareness and interest remains high in the area, bidder days will be held with BDUK framework providers to ensure they are aware of the scale and nature of our plans.

### D3 Procurement strategy

The preferred commercial option for the delivery of the JLBP is to use **a gap funded approach** which can be delivered using a number of procurement route options, including the BDUK framework. Having explored these different procurement route options, our preferred option is to run a mini-competition to procure a single delivery partner under the BDUK framework. We believe that this option will help us maximise potential supplier interest in the procurement process and will best meet BDUK's contractual requirements around local procurements.

#### ***Expected entrance to mini competition***

Local Authority partners are committed to delivering next generation infrastructure and services at the earliest opportunity. As such, our anticipated readiness date to commence

a mini-competition (tender) will be within 6 months from the approval of the JLBP, planned for September 2012. See Timetable in section E2 for further details.

### ***Local Weightings***

The framework, and its call-off evaluations criteria and weightings, will be considered for local adaptation under the workings of the procurement sub group to be created in the proposed organisational structure for the implementation of the project (see Figure 15). This sub group will utilise existing resources from each of the partner's procurement teams with specialist input, as and when required, from advisors. Any additional weightings to the above and beyond BDUK criteria will reflect local priorities, activities to stimulate local demand and support take up and will be approved by the Joint Broadband Programme Delivery Board.

### ***Ensuring Value for Money***

In addition to the full value for money safeguards built into the BDUK framework, partners will develop a single supplier scenario strategy to minimise the impact of the risk that only one bidder will tender for services. This will include independent analysis of costing proposals in line with current market operations. Furthermore, partners will seek to ensure an appropriate investment ratio is secured from the private sector. This will be monitored through the procurement sub group of the board.

### ***Managing Procurement***

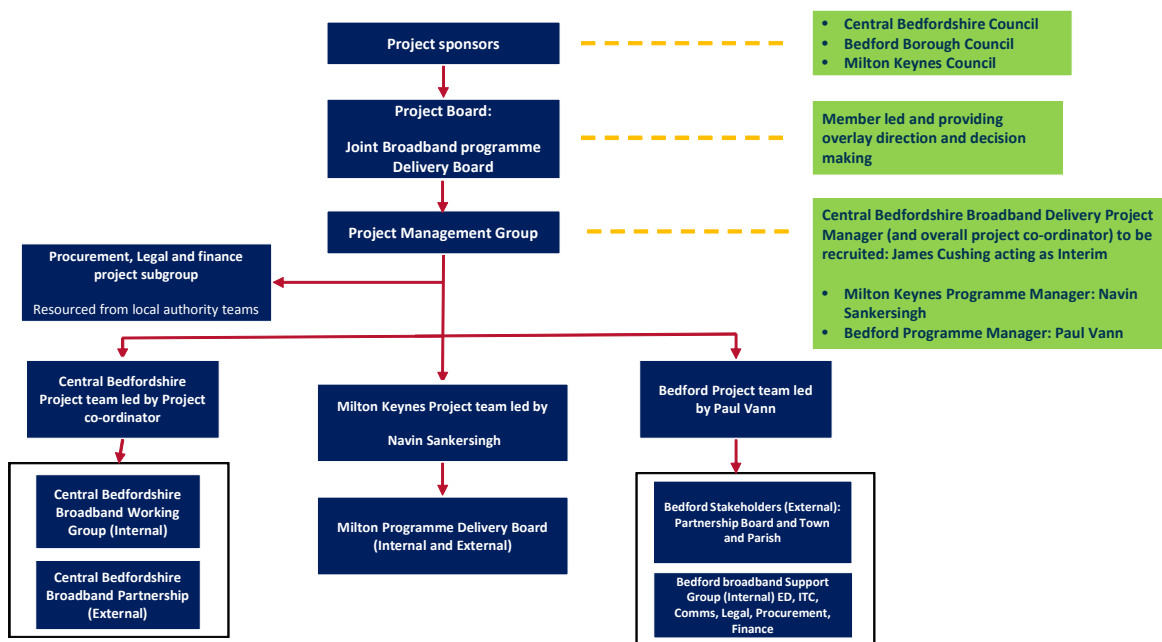
The partners have brought together a range of procurement, legal, technical and financial expertise in the projects procurement sub group (Figure 15). This consists of appropriately qualified local authority staff to comply with BDUK and statutory local government requirements. The subgroup will provide day to day input into the procurement process ensuring compliance with internal and external requirements. Recommendations will be made the Programme delivery board, ensuing accountable sign off from each Local Authority. Central Bedfordshire Council will act as the accountable body for the project. The Council has, as do all partner Local Authorities, considerable experience of providing audit and due diligence activities on externally funded projects. In addition to the expertise within the local authority partners, where required the Councils have put in place resources to secure appropriately qualified external support for the project.

## SECTION E – DELIVERABILITY

### E1 Project management, resourcing and funding

The partnership recognises the importance of effective project management to ensure successful delivery. The broadband project will be managed using PRINCE2 as the formal project management methodology, as well as the OGC Management of Risk (MoR) methodology. This will provide control of progress, expenditure and risk, as well as ensuring governance and management reporting mechanisms. Figure 15 shows the project structure.

Figure 15: Organisational structure [Source: CBC, MK, Bedford, 2012]



#### Project sponsors

The project is sponsored by Central Bedfordshire, Milton Keynes and Bedford Borough Councils.

#### Project Board - Joint Broadband Programme Board/Steering Group

The Project Board/Steering Group membership comprises of senior officer representatives and the relevant executive portfolio holder members from the three local authorities (Milton Keynes, Central Bedfordshire and Bedford Borough).

Other key partners/stakeholders will also attend the project board as appropriate to support engagement and any specific requirements. The Project Board will be responsible for the overall direction and decision making on this project. The Project Board will be chaired on a

rotating basis by the council executive portfolio holders who will act as the Project's Executive. The Project Board will also be responsible for ensuring that delivery of the project remains on course and ensure compliance with partner authorities processes.

### Project management

We will retain a team of highly experienced individuals with considerable expertise of working across existing broadband initiatives to serve on the project management team. Agreement has been secured from each of the three authorities' executive portfolio holders to commit the necessary resources to this project. **The project management team will include a project co-ordinator to coordinate the delivery of the broadband plan; this will be provided by Central Bedfordshire Council as accountable body.** Each authority will have an internal project officer providing a significant share of their time to support the Project Manager and lead on activities within their authority. Additional resources from each authority will be utilised such as finance, procurement, marketing and communications, legal, economic development and IT officers. External consultancy advice will also be used for support including on technical, procurement and State aid matters.

Overall the project management team costs will amount to about a 2 Full Time Equivalent (FTE) resources, including consultancy, over a 3-year period, which equates to a total funding commitment of GBP325,000. It is noted that the GBP325,000 total is 6.2% of our BDUK + local match total compared.

Figure 16 shows a breakdown of the activities, resourcing and costs for the project delivery. On-going financial, contractual and performance monitoring and evaluation of the project will be undertaken by the project management steering group, resourced through the three local authorities, utilising existing capabilities where possible.

Figure 16: Project team and programme resources cost [Source: Analysys Mason, 2012]

Costs of project team and programme resources (Revenue)	Total	2012–2013	2013–2014	2014–2015
GBP	000	000	000	000
<b>Budget</b>				
Advisors	50	40	5	5
Demand Stimulation	80	40	20	20
Project Team	195	75	60	60
<b>TOTAL</b>	<b>325</b>	<b>155</b>	<b>85</b>	<b>85</b>



### **E1.1 Broadband partnership and beneficiaries**

The Joint Broadband Programme Board (hereafter the “partnership board”) has been established by Bedford Borough Council, Central Bedfordshire Council and Milton Keynes Council to enable and support the successful implementation of the JLBP across the Bedford Borough, Central Bedfordshire and Milton Keynes areas. The primary objectives of the partnership board are to:

- Inform and provide guidance on the development of the JLBP.
- Foster and promote partnership and involvement with the JLBP of the area’s communities (business and residential) and public service agencies including engagement around further funding potential.
- Identify potential opportunities for demand aggregation and demand stimulation.
- Develop an appropriate service level agreement or contract to support the procurement processes required for the delivery of the JLBP.

Core membership of the partnership board consists of Bedford Borough Council, Central Bedfordshire Council, Milton Keynes Council, South East Midlands Local Enterprise Partnership, Rural Communities Representative (Bedfordshire) and the Older People Representative (Milton Keynes). Wider engagement will be open to appropriate and interested parties as deemed appropriate by the partnership board, with any additional members to be agreed by a majority vote of the above membership.

The JLBP will form the basis for attracting public and private sector investment for the delivery of the broadband project and will be the main vehicle for access to BDUK funding allocations for the partner authorities. The partner authorities will also develop an appropriate service level agreement or contract to support the procurement processes required for the delivery of the JLBP.

## E2 Timetable

The table below sets out the timetable for the delivery of this Joint Local Broadband Plan. The timetable is subjected to the following key critical dependencies (In bold font in the timetable);

- BDUK assurance check-point A: BDUK sign-off of JLBP and securing of BDUK funding
- BDUK assurance check-point B and Issue of mini-tender (using BDUK framework)
- BDUK assurance check-point C, State aid approval by BDUK and Council decisions to award contract by Milton Keynes, Central Bedfordshire and Bedford
- Signing of contract by successful bidder

In Figure 17, we have factored in a realistic timescale to address delays or issues that could arise from any of the critical paths specified above.

Figure 17: Project timetable [Source: Analysys Mason, 2012]

Key milestone	Expected date
Submission of JLBP	Completed
Project set-up	Completed
Award of BDUK framework contract	16/20 April 2012
<b>BDUK assurance check-point A: BDUK sign-off of JLBP and securing of BDUK funding</b>	<b>29 April 2012</b>
Securing of any additional funding, including ERDF approvals (If any)	Completed by 29 August 2012
Preparation of data-room and local requirements	On-going
Demand registration activities	On-going
Demand stimulation activities	On-going
<b>State-aid public/suppliers consultation</b>	<b>Completed by 29 August 2012</b>
Final submission of local requirements and data room data	29 August 2012
Market testing / Further Bidder Engagement	29 August 2012
<b>BDUK assurance check-point B: BDUK sign-off</b>	<b>19 September 2012</b>
<b>Issue of mini-tender (using BDUK framework)</b>	<b>20 September 2012</b>
<b>BDUK assurance check-point C, State aid approval by BDUK and Council decisions to award contract by Milton Keynes, Central Bedfordshire and Bedford</b>	<b>20 December 2012</b>
<b>Signing of contract by successful bidder</b>	<b>31 December 2012</b>
Start of roll-out	April 2013
50% of roll-out completed	April 2014
Completion of roll-out	Currently anticipated for March 2015
Monitoring and evaluation	2012-2016

### **E3 Expected strategic benefits**

Analysys Mason developed a detailed socio-economic model to assess the socio-economic impacts and benefits of NGB to citizens and businesses in our area. The model is a bottom-up approach designed in line with the European Commission guide to cost benefit analysis for investment projects (CBA guide). The model has been used to support a number of successful funding applications and LBP approvals including the ERDF funding for Cornwall, BDUK funding for the Scottish Highlands & Islands, and more recently for the Warwickshire County Council LBP.

Analysys Mason carried out the quantitative analysis using a discounted cash flow (DCF) approach with a 3.5% real discount rate and a reference period of 15 years. The economic net present value (ENPV) of benefits and costs are then calculated in order to estimate the GVA uplift for the Central Bedfordshire Council area. This is then extrapolated to the full area of our project (based on existing GVA levels across the area).

In addition, there are a number of qualitative socio-economic benefits that can be achieved through NGA broadband. Some of these are outlined below.

- NGA broadband can provide an opportunity for greater innovation, increased access to new markets and greater consumer choice, compared to the experienced with current-generation broadband.
- Faster connectivity, greater consistency, higher quality and improved reliability of service from NGA broadband are very useful for back-up arrangements, facilitating back-up of vital data and multiple, real-time, high-definition data transmissions.
- Using e-government and Tele-health initiatives in the near future can potentially reduce administration, resulting in Government savings.
- Improved employee retention rates can be achieved by increasing employee satisfaction through flexible working, which means that companies could potentially reduce their recruitment spend.
- There could be a reduction in traffic congestion due to fewer vehicles being on the road during peak times, as a result of more people adopting flexible working and remote learning.
- There could be a reduction in air and noise pollution due to the increased adoption of flexible working and remote learning.
- Reduction of in-person visits from home healthcare workers can lead to time savings and reduction in carbon dioxide emissions.
- NGA will promote greater social equity and further reduce the probability of having a digital divide.

The output of our analysis shows that there will be positive socio-economic return as a result of the NGA broadband project. As an example, a net GVA uplift of circa **GBP98 million** (discounted value) over a period of 15 years has been projected to be generated in Central Bedfordshire, with an initial investment of **GBP1.82 million** from public funds.

Extrapolating this to the full area of our project (based on existing GVA levels across the area), the GVA uplifts for Bedford and Milton Keynes are projected to be in the order of £73m and £151m respectively. This gives an estimated total uplift of circa £332m (discounted value based on 15 years benefits).

#### **E4 Risk management/Log**

Risk management is a regular and standard procedure within our partner organisations, and this principle will be applied to delivery of this broadband plan. For this project we have developed a risk management plan and risk register in line with the OGC's MoR and PRINCE2 best practice. The risks identified to the broadband programme are detailed in Figure 18 overleaf. The following scoring is used:

**Likelihood scoring** – (1 is Low, 2 is Medium, 3 High)

**Severity scoring** – (1 is Low, 2 is Medium, 3 High)

**Threat to Project scoring** – (1-3 is Low, 4-6 is Medium and 7-9 is high: Multiplier of likelihood and severity)

Figure 18: Risk management/Log

Risk		Risk assessment (Low, Medium, High)		Threat to project / Mitigation (Low, Medium, High)
No	Description	Likelihood	Severity	
1	Suppliers not interested in investing in the project	Medium	High	Medium/ On-going engagement with the market at an earlier stage and development of a good demand registration and stimulation plan to demonstrate a good business case for investing in our areas.
2	Insufficient funding from the private sector to support the project	Medium	High	Medium/ On-going engagement and market testing to ensure commitment from private investors. Demand registration initiatives
3	Failure to secure a timely BDUK funding award and delay to BDUK project procurement and implementation timetable slot	Medium	Medium	Medium/ Support from BDUK, external consultancy and partnership board to develop a joint local broadband plan that complies with latest BDUK requirement for securing BDUK funding. On-going engagements with BDUK on BDUK call-off timing and the partners' local requirements.
4	Failure to secure a supplier through the BDUK procurement framework	Low	Medium	Low/ Use alternative procurement route
5	Prioritisation of areas for roll-out does not align with the roll-out plans for the supplier	Medium	Low	Low Early engagements with suppliers to allow them to understand the roll-out priority areas.
6	Rejection of state aid application or delay in sign-offs	Medium	High	Medium/ The use of latest BDUK state aid template with guidance and support from BDUK and appointed external consultancy on state aid matters.

Risk		Risk assessment (Low, Medium, High)		Threat to project / Mitigation (Low, Medium, High)
No	Description	Likelihood	Severity	
7	Supplier does not have capacity to deliver once contract awarded.	Medium	Medium	Medium/ Engagement with BDUK to ensure the BDUK framework assesses supplier capacity. Ensuring the capability of suppliers to deliver is fully tested throughout the procurement process.
8	Insufficient resources available for the management and delivery of the project	Medium	Medium	Medium/ A dedicated and experienced project has been set up with approval from our partners' corporate boards
9	Cost overruns	Medium	Medium	Medium/ Suppliers must demonstrate their cost monitoring approach to the project to ensure the project budget is maintained. Our project management team will also monitor the cost of the project and will trigger exception planning to bring back on track to agreed tolerances. Cost overrun risk will be transferred to the supplier
10	Proposed technical solution is unviable for NGB	Low	Medium	Low for NGB and Medium for USC Early engagements with suppliers to allow them understand our proposed technical solution for NGA and USC delivery.
	Proposed technical solution unviable for USC	Medium	Medium	Cost modelling carried out by Analysys Mason shows that we are likely to fulfil our NGA broadband objective using mainly FTTC and alternative technologies for uplift of the remaining slow spots. Use of BDUK framework will mitigate risk as it includes regulatory pricing and tested technical solutions

Risk		Risk assessment (Low, Medium, High)		Threat to project / Mitigation (Low, Medium, High)
No	Description	Likelihood	Severity	
11	Costs of deploying a solution for unique situations in the area proves too expensive for available funds (e.g. topography)	High	Medium	Medium/ Management of public/stakeholder expectations through on-going engagement
12	Planning permission and way leaves delays delivery	Medium	Medium	Medium/ Working with planning authorities to mitigate this risk
13	The successful supplier does not attract enough ISPs to offer a competitive range of services and therefore choice to customers	Medium	Medium	Medium/ Suppliers to demonstrate during procurement how they will attract an increased number of ISPs to our areas, and how they will make the network competitive. Attraction of LLU players will be discussed during procurement Use of BDUK framework will mitigate risk as it includes requirement for providers to have ISP's in place
14	The procured solution is not future-proofed	Medium	Medium	Medium/ Suppliers to demonstrate during procurement that the solution is innovative and future-proofed. Solutions will be monitored and benchmarked against other successful broadband networks.
15	Take-up of the new services by residential and business users is lower than predicted	Medium	Medium	Medium/ Effective demand stimulation and demand aggregation activities are planned by the partner LA's throughout the project in addition to private sector demand stimulation activities
16	Expected outcome of the broadband plan is not realised	Low	High	Medium/ Engagement with stakeholders and the



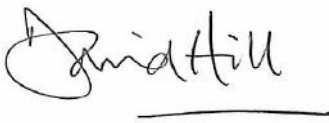
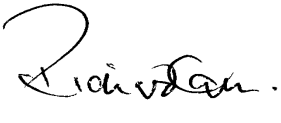
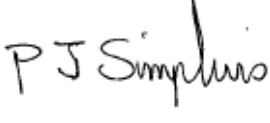
Risk		Risk assessment (Low, Medium, High)		Threat to project / Mitigation (Low, Medium, High)
No	Description	Likelihood	Severity	
				supplier(s) to ensure the expected outcomes is monitored and realised. We will ensure that delivery is not fully signed off until requirement is delivered against initial expected outcomes.

**SECTION F – STATE AID**

We have developed this joint broadband plan to be consistent and compliant with the latest state aid requirements. We have developed a detailed mapping of the target areas for basic broadband and NGA broadband support, and the partner authorities will undertake additional market consultation for one month prior to commencement of the procurement exercise in order to maximise market awareness of the broadband roll-out plans accounted for and to ensure that any additional plans are identified.

An open tender process will be held, as described in Section D3, to deliver the most economically advantageous offer. The tender process and specification will be technology-neutral, and a minimum 7-year wholesale access obligation will be imposed on our preferred supplier. The prices for wholesale access to the broadband network will be subjected to a benchmarking mechanism, and an appropriate claw-back mechanism will be discussed during procurement stage and included in the contract with the successful supplier.

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

<p>a) Submission:</p> <p><b>In submitting the Joint Local Broadband Plan, I verify that the proposal fits with corporate policy</b></p>		
<p>Signed:</p>  <p>Name: David Hill</p> <p>Job Title: <b>Chief Executive, Milton Keynes Council</b></p> <p>Date: 23.02.12</p>	<p>Signed:</p>  <p>Name: Richard Carr</p> <p>Job Title: <b>Chief Executive, Central Bedfordshire Council</b></p> <p>Date: 23.02.12</p>	<p>Signed:</p>  <p>Name: Phil Simpkins</p> <p>Job Title: <b>Chief Executive, Bedford Borough Council</b></p> <p>Date: 23.02.12</p>

## Annex A Supplementary information: Maps

Figure A.1: Basic broadband speed distribution by 2015 [Source: BDUK, Ofcom, Analysys Mason 2012]

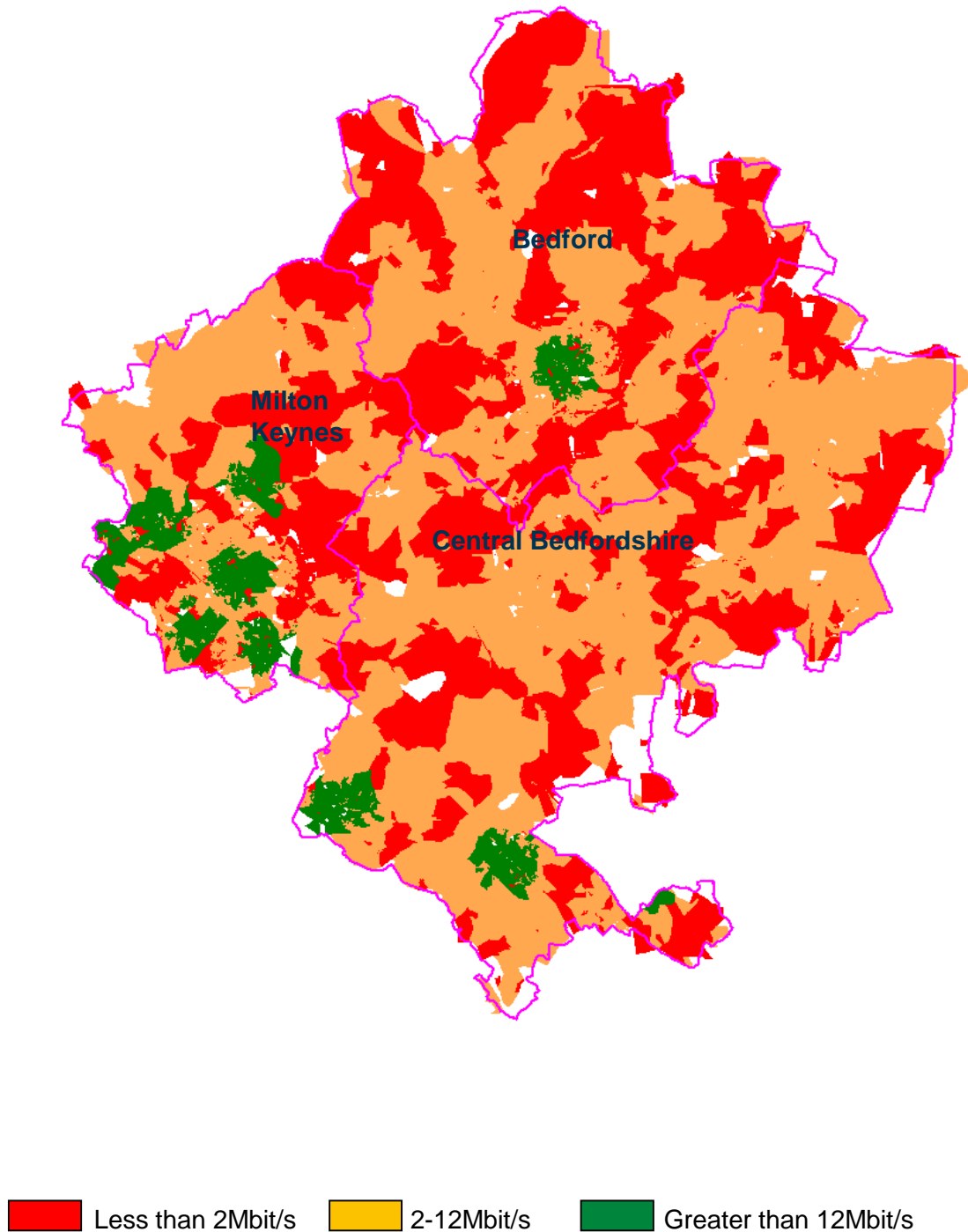


Figure A.2: Current broadband services in our areas showing 'slow' spot and 'not' spot locations [Source: BDUK, Ofcom, Analysys Mason 2012]

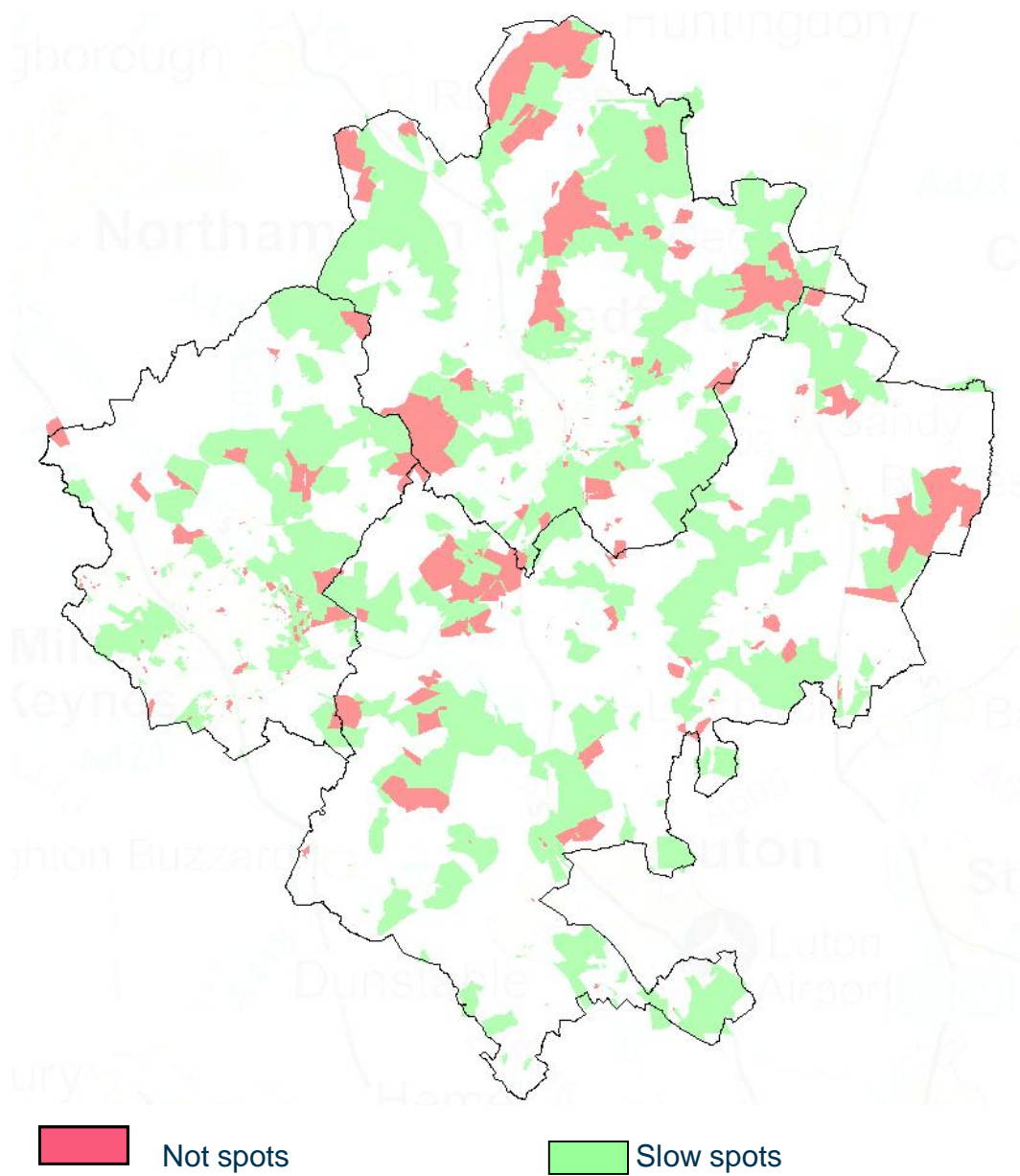


Figure A.3: Basic broadband Black Grey White (BGW) [Source: BDUK, Ofcom, Analysys Mason 2012]

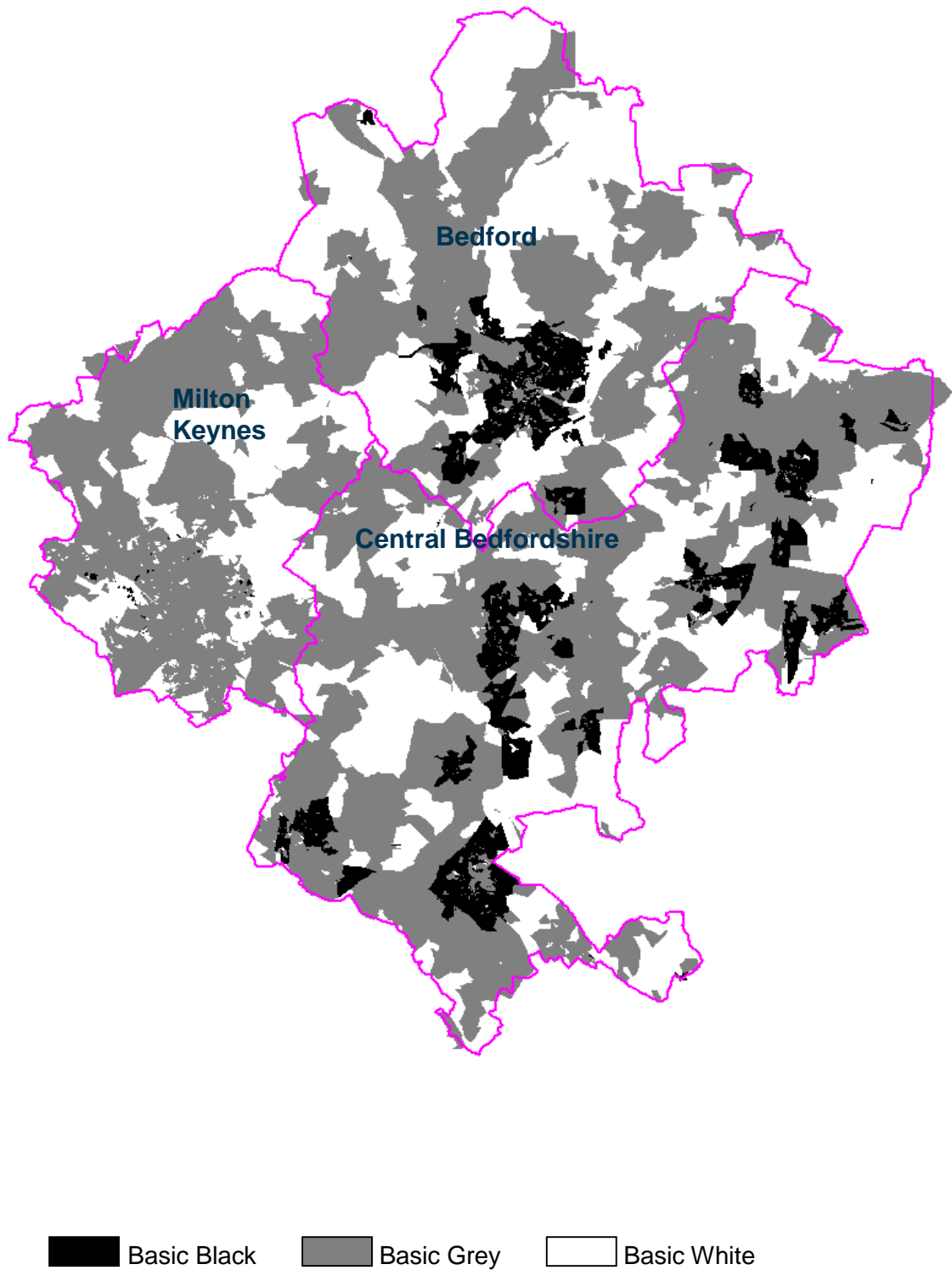


Figure A.4: BT NGA coverage by 2015 [Source: BDUK, Ofcom, Analysys Mason, 2012]

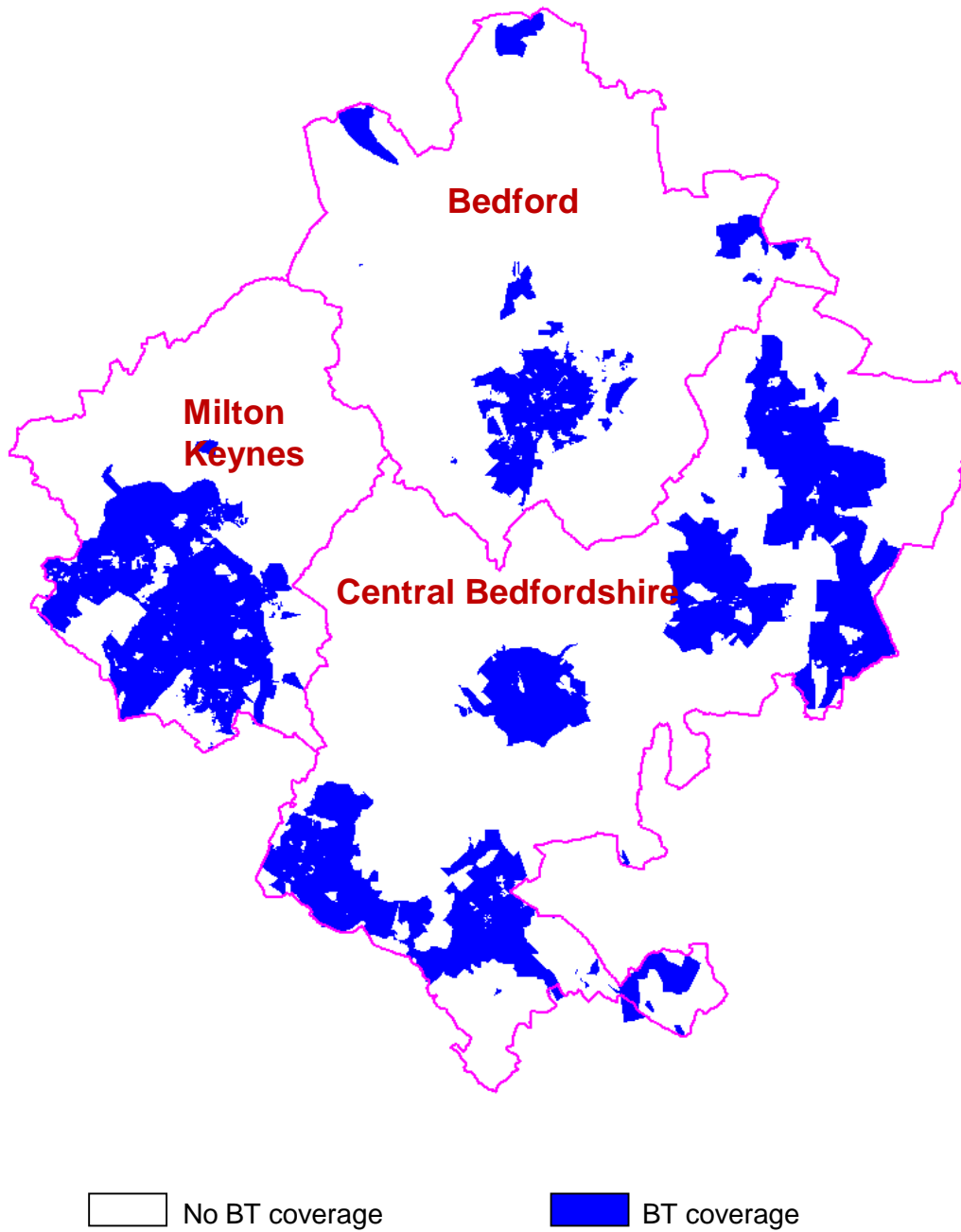


Figure A.5: Virgin Media coverage by 2015 [Source: BDUK, Ofcom, Analysys Mason 2012]

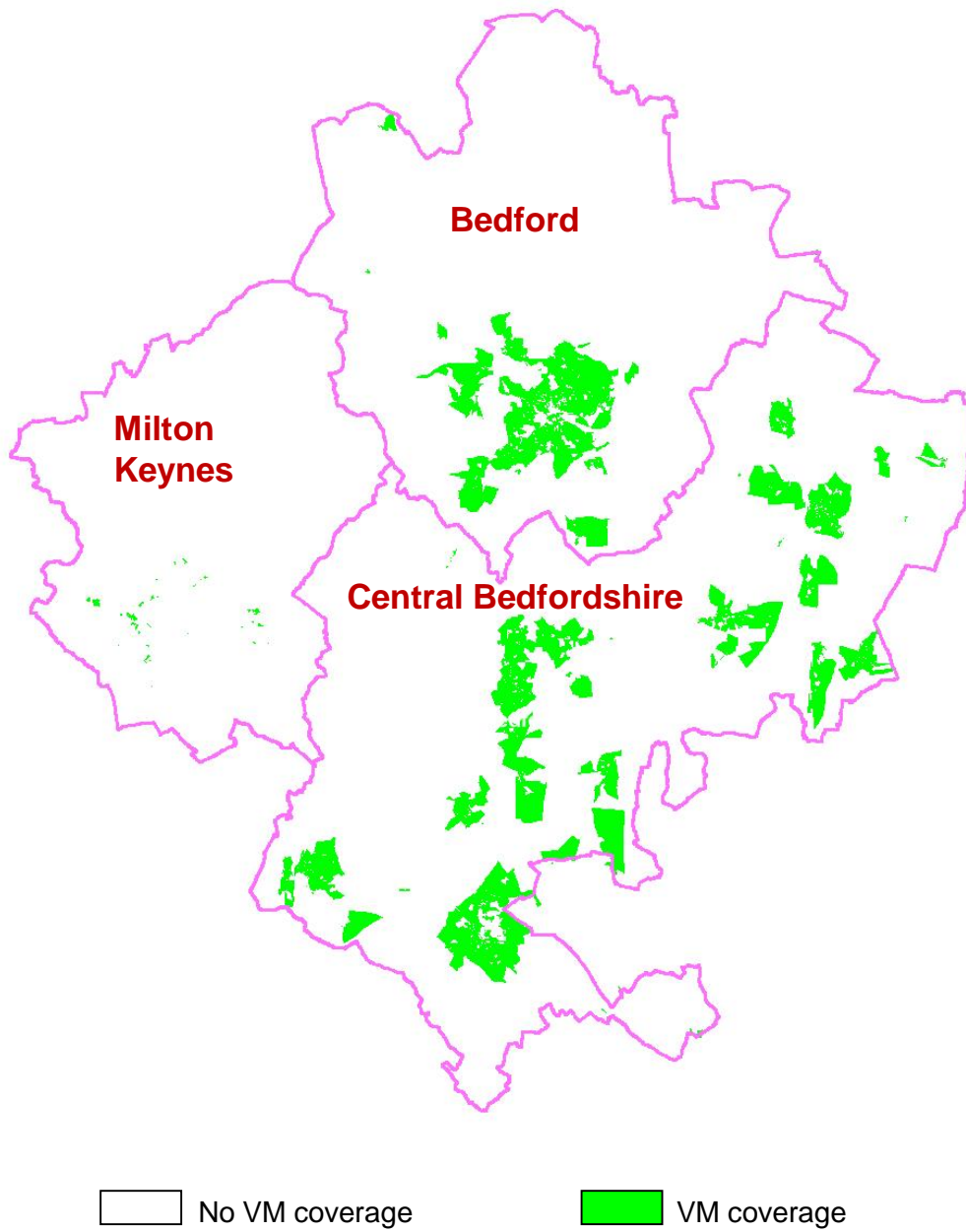


Figure A.6: NGA broadband BGW map [Source: BDUK, Ofcom, Analysys Mason 2012]

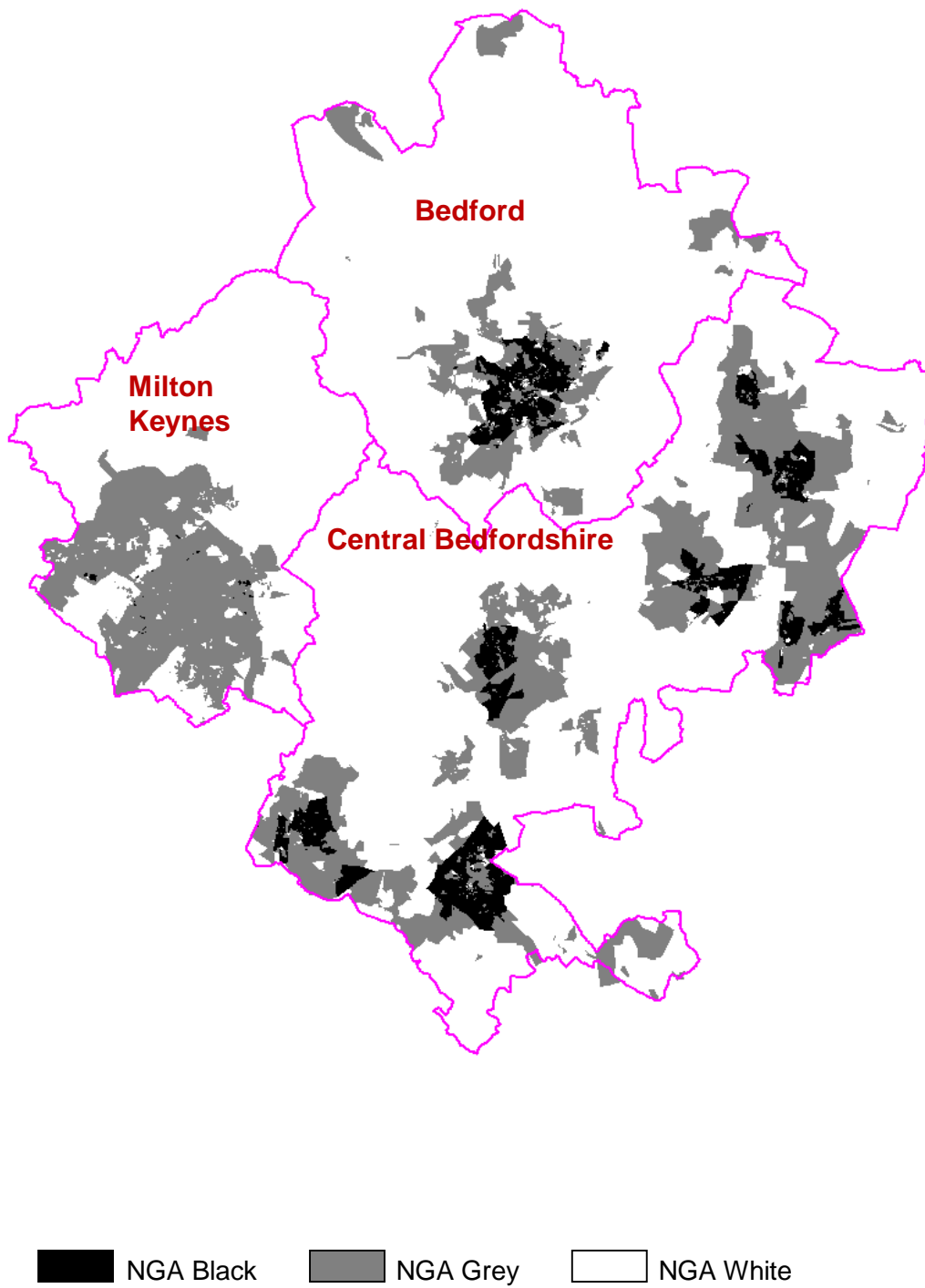
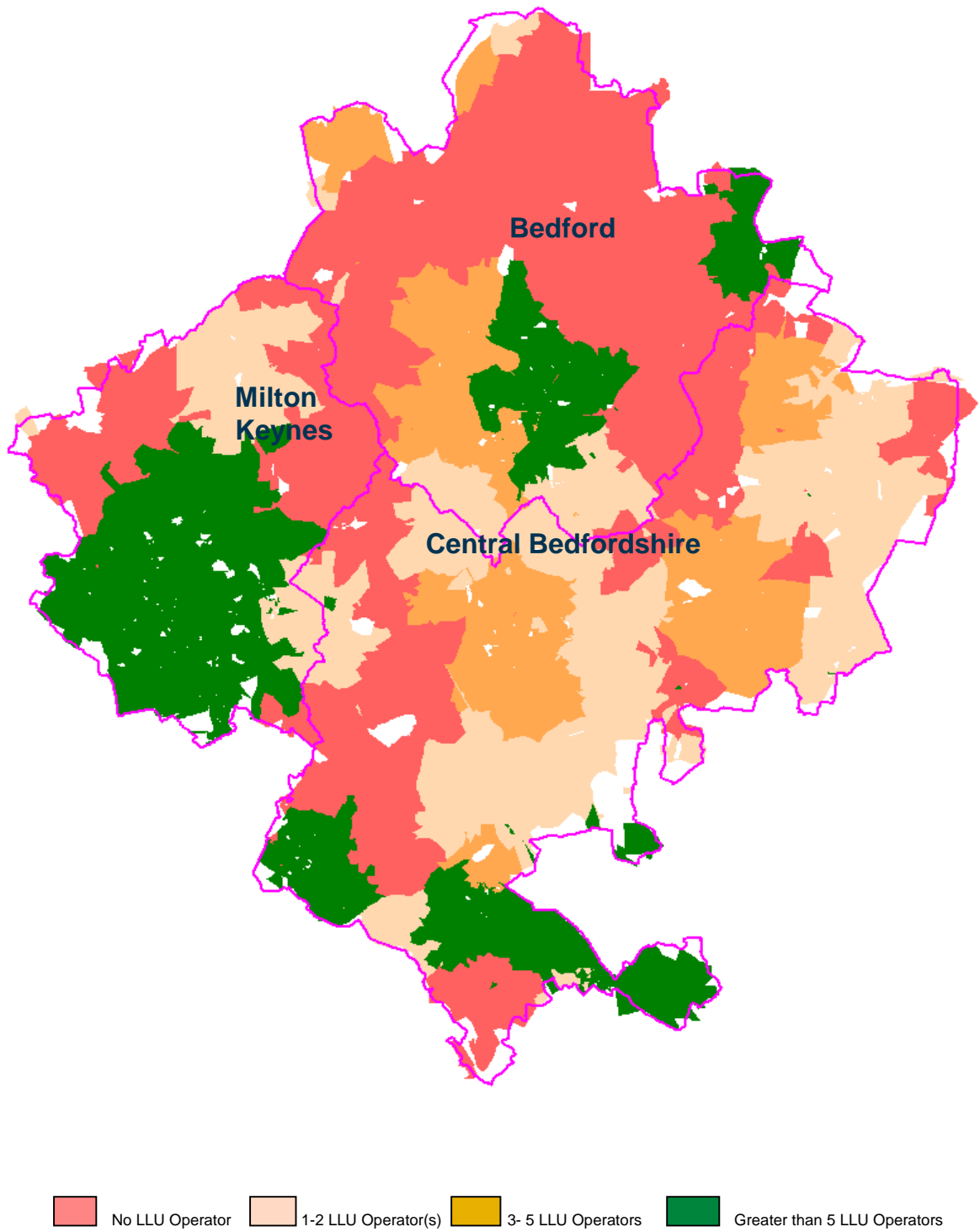




Figure A.7: Distribution of LLU operators [Source: Analysys Mason, Samknows, BDUK, 2012]



## Annex B      Supplementary information: Strategic benefits linked to the broadband project

Analysys Mason carried out the qualitative assessments of the socio-economic benefits of improved broadband in our area using their knowledge of socio-economic impacts of improved broadband gained from working on various broadband projects in the UK and across Europe, particularly the recent work carried out for the European commission on the Socio-Economic impact of bandwidth in Europe.

The qualitative assessments have also been informed by what our residents and businesses are saying on the expected benefits of broadband in the area through our demand registration and survey activities. We are confident that achieving this vision will deliver our expected strategic benefits namely to develop and secure economic growth by:

- **Improving business productivity and efficiency** through supporting business growth, attracting new high value activity investment into the area and supporting business and labour market skill development. Evidence shows that high quality and improved broadband access will enable delivery and development of efficient system to support business growth. The responses from our surveys (see Section A2) indicate that improved broadband in the area will support business productivity and growth in the economy and thereby safeguard existing jobs.
- **Supporting sustainable employment** - While job growth up until the recession had been strong in the area, job densities for instance in Central Bedfordshire (0.67) in 2008 have remained the lowest in the East of England, and lower than the England average (0.83). In Central Bedfordshire, the ratio shows that there are two jobs for every three resident people, and highlights the immediate priority to stimulate local employment opportunities. Bedford still has a higher unemployment rate than both the East of England and South East regions and the country as a whole. During 2010, the unemployment rate in Milton Keynes fell faster than in the South East region and England, but by December 2011, still equalled the national rate of 3.8% (GB). One of the factors responsible for this is lack of appropriate skills or employability profile to meet the needs of employers. The level of skills of working age in our areas measured by qualifications was lower than that of the South East region and in some cases lower than that for England in 2008. Access to improved broadband services will deliver a platform for our citizens to improve their overall skills and qualifications profile through digital education and training especially gaining higher level and specialized skills.
- **Strengthening the rural economy** - The many thousands of rural businesses in our area play a key role in our economy. Information from our survey exercise highlights a

number of potential barriers to rural businesses, including lower level of access to high speed broadband and limited commercial viability for rolling out NGA broadband. Improved broadband services to the rural area will help solve the problem of digital exclusion so that our rural areas can benefit from the opportunities presented to address rural issues including access to services and social issues for example the rural business will be able to find workers who can live locally and still thrive on social networks to connect to friends and family and have flexibility with remote working. There will also be on-going increase in the rural population with new sustainable jobs particularly in high value sectors.

- **Supporting local business start-ups and resilience** – Engagement with our business stakeholders suggest that continuous support for local business start-up and sustainability are essential if we are to maximise the economic growth in our areas. This must be considered in light of the high numbers of small businesses in the areas and the particular difficulties these businesses face in accessing support and networking opportunities, in terms of the time away from the business and resulting loss of earnings especially in the rural areas. Our broadband plan and improved broadband infrastructure will help local businesses, especially SMEs, access new market opportunities through the increased range of support services being delivered online.
- **Contributing towards greener environment** – Currently Milton Keynes has one of the highest carbon footprints in the South East region, in part due to the level of economic activity, the density of development and transportation. This will likely continue for Milton Keynes and the other partner authorities because we are projecting an increase in population in the future in our areas. Population growth will lead to increased numbers of houses and jobs and associated infrastructure that will be needed in our areas which will inevitably put pressure on our natural and built environment. If this is not managed sensitively, the emissions of carbon dioxide and other pollutants will significantly increase and continue to adversely impact on climate change. The quality of the area's environment can be improved and sustained through improved broadband provision through reducing travel and costs and carbon dioxide emissions. As a result broadband connectivity, remote and flexible working opportunities and also enabling workspaces to be used more efficiently. Faster broadband will also enable the development of environmental technology for reduction of carbon emissions.
- **Promoting equality in the area** – For us to achieve our proposed economic growth targets, our residents need to be able to contribute their potential. The broadband project has a key role to play in addressing the issue of inequality as its availability and reach will enable an increased number of people in under-represented groups to access training and employment opportunities. For example there are possibilities of providing education through **virtual and remote learning centres** using faster

broadband connectivity (access to online library or connect to a remote learning centre)

- **Education and provision of opportunities for children and young people** – Improved broadband connectivity in our area will mean improved education and training for our children and young people through access to various online training and learning resources. For example high definition videoconferencing for schools could be used for video teaching that can improve the learning environment for students and enable students to participate in lessons at times when travelling to school is made difficult due to weather or illness. It may also enable teaching to be shared between schools, widening the range of subjects available to pupils. Furthermore, online learning opportunities will be supported by increased connectivity allowing for greater interactivity and richness of content. Students of all ages will be able to benefit from quicker access to online research materials and future learning opportunities is clear that access to on-line learning resources is increasingly important for both school pupils and FE and HE students to the extent that some students do not return home in holiday periods because of poor broadband access.
- **Helping the transformation of public services** – Our broadband plan will help deliver potential Government savings from reduction in administration overheads by using e-government initiatives, such as online billing, and e-health initiatives, for example tele-health and tele-care services (providing of health care, health information, health monitoring and health education across a distance, using telecommunications technology) which could help improve services for residents and efficiency for service providers.

## Annex C      Supplementary information: Evidence of stakeholder engagement and letter of funding approval

This section contains the following supplementary documents:

- Central Bedfordshire Council Published Council Minutes 23 February (2x)
- Bedford Mayoral Decision regarding Broadband Plan and Funding - Decision 998
- Milton Keynes letter of funding approval
- Milton Keynes Delegated Decision on JLBP

## Annex D Terms of reference for Joint Broadband Program Board (JBPB)

This section contains the following supplementary documents:

- Terms of reference for Joint Broadband Program Board (JBPB)