

**PUBLIC CONSULTATION
Better Broadband for Norfolk**

**Consultation start date
Friday 18th July 2014**

**Consultation end date
Monday 18th August 2014**

EXECUTIVE SUMMARY

This consultation has three main purposes:

1. To set out Norfolk County Council's understanding of the extent of existing broadband infrastructure and services in Norfolk and to ascertain whether this information is accurate by feedback in response to this consultation. This includes what broadband services people in Norfolk do actually receive.
2. To explain Norfolk County Council's proposed additional public sector investment to achieve Better Broadband for Norfolk.
3. To ascertain if there are any credible investment plans for similar/comparable projects that should be taken into consideration in deciding where to target public sector investment.

Feedback to this consultation is invited from all interested parties. This includes existing or potential broadband network providers, internet service providers and businesses and residents of Norfolk and neighbouring counties.

This consultation seeks to ensure that public sector investment in broadband is targeted where it is needed and not where commercial providers will provide these services.

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1 – INTRODUCTION

1.1 The Project

The Better Broadband for Norfolk Programme is working to extend better coverage of broadband across Norfolk, beyond the reach of commercially-funded deployments.

Norfolk County Council signed an initial contract with BT at the end of 2012 to extend NGA broadband to ~83% of Norfolk premises by the end of 2015, together with a Universal Service Commitment of at least 2Mbps for any premises not getting the higher-speeds enabled by the investment in fibre-based broadband. This Initial Contract was procured by a call off contract from the BDUK Broadband Delivery Framework Agreement. We are making good progress with the deployment of this contract, beating our target of 20,000 premises by the end of 2013, and on track to reach ~165,000 premises by the end of 2015.

Norfolk County Council has now secured additional funding to further improve Broadband infrastructure (the Additional Funding). It is the use of this Additional Funding, and the Intervention Area where it may be used, that are the subject of this public consultation.

1.2 Aims and Objectives

The objectives of the Better Broadband for Norfolk project are to:

- Provide NGA broadband speeds for a large part of the county. This should deliver a download speed of 30Mbps or in any event more than 24Mbps. This will create higher 'speed uplift' leading to the largest economic and other benefits.
- Achieve 2Mbps broadband speeds as a minimum, right across Norfolk. It is expected that a mix of technologies will be required to achieve this objective.
- Create a long-term solution that provides definable 'future proofing'. This means that as applications requiring faster broadband increase, it must offer the potential to keep pace with these demands.
- Offer choice of Internet Service Provider and be affordable to customers and continue to offer value for money over time.

In addition to the above, the specific aims and objectives for the Additional Funding are:

- To invest only in providing NGA infrastructure (a universal service commitment having been a feature of the Initial Contract).
- To enable this further infrastructure implementation to be complete by March 2017.

The Additional Funding will be prioritised based on the following principles:

- This further implementation should extend NGA broadband infrastructure availability in Norfolk, and should cover as many properties as possible across Norfolk.
- Also, areas of Norfolk that have a concentration of business subscribers as a proportion of total subscribers that exceed 10% (the average proportion is approximately 8%) will be prioritised as long as this objective does not impact on the viability of the rollout overall.

1.3 Funding

We have recently secured additional public funding of up to £19.18 million to further extend NGA broadband across Norfolk with the aim of increasing coverage to ~95% by the end of 2017.

1.4 Procurement approach

In order to deploy the Additional Funding, we intend to conduct a further mini-competition under the BDUK Broadband Delivery Framework to award a second contract to a supplier to deploy the extended coverage.

Once we have defined our Intervention Area, we will be issuing an Invitation to Tender (ITT) to Framework suppliers to bid for the opportunity to fulfill a new contract to deliver the extended coverage. We aim to complete the procurement by the end of 2014, and for the extended deployment of infrastructure to begin by mid 2015 (in parallel with the on-going deployment under the Initial Contract).

1.5 State Aid

EU State Aid rules will apply to the proposed public sector investment of the Additional Funding. These rules aim to minimise any distortion of competition within the EU arising from any aid or subsidy granted to a commercial undertaking by the public sector. The project will only invest where it is compatible with these rules. It is intended that this investment will fall within the scope of the Commission Decision State Aid SA.33671 reference number C(2012)8223. This Commission Decision approves a UK wide broadband scheme. It gives the role of National Competence Centre to Broadband Delivery UK (BDUK), who will approve public sector broadband investments to be made where these are compatible with the scope of the Commission Decision. The BDUK Broadband Delivery Framework has been set up to give a procurement process that complies with the requirements of the EU State Aid rules and the Commission Decision.

As part of the new procurement process for the Additional Funding, we have carried out market research and an open market review to establish existing and planned

(within the next 3 years) commercial coverage of broadband services in Norfolk by all existing, and any prospective, broadband infrastructure providers. We have used this information to define the Intervention Area to be targeted by the Additional Funding. The purpose of this consultation is to formally test the validity of the proposed Intervention Area. Following this consultation, the Intervention Area will be the defined area where the Additional Funding will be deployed to improve broadband infrastructure in accordance with the terms of the Commission Decision, following completion of procurement using the BDUK Broadband Delivery Framework.

1.6 Specifications

The broadband network delivered by the selected supplier will have the following high level specifications:

Download and upload speeds

For as much of Norfolk as possible, the network should implement Next Generation Access broadband infrastructure capable of providing access for customers to broadband services with NGA download speeds of 30Mbps or in any event more than 24Mbps with a minimum suitable upload speed.

Where it is not possible to deliver NGA services, broadband service customers should have minimum download speeds of 2Mbps. This will be achieved via the Initial Contract awarded under the Better Broadband for Norfolk Programme. It is not the intention to use the Additional Funding to invest in basic broadband infrastructure.

Access

It shall provide wholesale broadband services capable of use by Retail Internet Service Providers to deliver broadband services to residential and business customers. It will provide wholesale access for the minimum seven years as set out in the Commission Decision. This means that it will not be restricted to any one service provider, and customers should have a choice as to who provides their broadband services via the subsidised network.

2 - THE PROJECT AREA

2.1 Settlement Pattern and Population Density

Norfolk is a very large rural county with a land area of 549,751 hectares. Approximately forty-five percent of the 865,300 population reside in just four large urban areas, the city of Norwich and the three large towns of Great Yarmouth, King's Lynn and Thetford.

Geographical coverage

The project will target all properties within Norfolk geographical boundaries.

Rural Norfolk is relatively sparsely populated and that population is also dispersed across the whole county (i.e. there are no natural features, mountains, major lakes, or moorland that tend to concentrate people into confined settlements). The county's population density in 2012 was 1.61 persons per hectare, which is the sixth lowest of the 27 shire counties - though with 537,066 hectares, Norfolk is the fifth largest in land area.

3 - EXISTING PROVISION

3.1 The initial Better Broadband for Norfolk Contract

As a result of a combination of previous commercial deployments and the Better Broadband for Norfolk Programme, by the end of 2015, approximately 89% of Norfolk properties will be served from Next Generation Access (NGA) infrastructure. This will mean that 83% of Norfolk properties will have access to Superfast broadband speeds (24 Mbps+).

The remaining 6% of properties that are served by NGA infrastructure will have access to speeds of 24 Mbps or less.

3.2 Current wired access networks

Virgin Media

Virgin Media infrastructure provides access to broadband speeds of up to 152 Mbps. Virgin Media infrastructure is available in some Norfolk locations, primarily in Norwich, Great Yarmouth and Kings Lynn.

BT

BT Fibre to the Cabinet infrastructure offers access to broadband speeds of up to 80 Mbps. Fibre to the Premises infrastructure offers speeds up to 330 Mbps. BT has implemented this Next Generation Access broadband infrastructure in some Norfolk locations, primarily in Norwich and larger towns.

3.3 Mobile provision

Norfolk has existing services from mobile telephone providers, with 3G (third generation) services providing broadband services in some areas. The operators providing these infrastructures are Vodafone, EE, and O2. To date, we have not been advised of any planned implementation (within the next three years) of 4G mobile services in the Norfolk area.

3.4 Wireless Provision

There are also a number of local wireless schemes operating, including:

- ‘WiSpire’ offers services in various locations across Norfolk.
- ‘Thinking WISP’ also offer services in locations across Norfolk.
- The BT Openzone service which provides users of wireless devices with access to wireless broadband. These services are available at ‘BT hot spots’ such as cafés, hotels, airports and stations.

4 – MARKET DEVELOPMENTS

4.1 Current situation

As part of the process of identifying and classifying areas, Norfolk County Council has completed market research to confirm (at an NGA and a Basic broadband level) the current level of broadband coverage in Norfolk.

This market research demonstrates the expansion of Next Generation Access infrastructure across Norfolk, as a result of the first Better Broadband for Norfolk contract. It shows the effect of the Universal Commitment to ensure a minimum 2 Mbps for all premises, with largely reduced sub 2 Mbps areas. However, it also demonstrates:

- the areas where NGA infrastructure is still not available; and
- the locations where, even though NGA infrastructure has been deployed via commercial rollouts, some premises served from this infrastructure have access to download speeds of less than 2 Mbps.

The EU Guidelines give definitions to describe the level of, respectively, Basic and NGA broadband coverage. Targeting of basic and NGA is detailed in the Commission Decision. The definitions as applied in this consultation are given in the glossary at the end of this document. These definitions are reflected on the maps in this document, which show Norfolk County Council’s current understanding of Basic and NGA broadband infrastructure in Norfolk:

- Map A shows NGA coverage.
- Map B shows Basic coverage.

In terms of investment for the provision of NGA services, the areas that will be targeted are those designated as ‘White NGA’ areas. These areas are further classified by reference to their designation as one of Basic White, Basic Grey or Basic Black areas.

Where the area is designated Basic Grey or Basic Black, these areas will be targeted for investment for the provision of NGA services, along with those areas designated as Basic White. The exception to this will be where the area is designated as Basic Black due to the presence of two wired networks. In such cases, the market conditions are considered strong enough not to warrant public sector intervention. Based on the mapping provided with this consultation, any areas that are designated as Basic Black are already excluded from the Intervention Area on the basis they are designated as NGA Grey.

4.2 Approach to partial coverage within postcodes

In some postcode areas there is partial NGA coverage, in that some premises can receive a service that would lead the postcode area to being classified as NGA Grey, whereas the service other premises within the postcode can receive would lead to the postcode area being classified as NGA White. This typically occurs in rural areas, where there is a significant drop off in coverage in the furthest parts. Alternatively it may arise because part of a postcode area is served by a particular network or part of a network infrastructure that does not serve the remainder. Where such partial coverage occurs, the postcode area is designated as NGA White, as to otherwise exclude it from the Intervention Area would lead to gaps in coverage. However:

(a) the analysis of such partial coverage will be sent to the network operators concerned concurrently with the commencement of this consultation to allow these operators the opportunity to verify this analysis; and

(b) as far as reasonably possible and subject to the most economical solution within the constraints of the technology deployed, the intervention will only be targeted at those premises of the postcode area concerned that do not, or are not planned to, receive a service that would lead to them being mapped as NGA Grey.

In the above scenario, there may be cases where there is more than one current or planned provider of NGA services but there is still partial coverage, in that some premises within the postcode area do not receive a NGA service (that is one which would otherwise lead the postcode area being classified as NGA Grey) from any of the providers. In such cases our approach to this is that the postcode area is mapped as NGA White and it is included within the Intervention Area, but:

(i) as above, the analysis of such partial coverage will be sent to the network operators concerned concurrently with the commencement of this consultation to allow these operators the opportunity to verify this analysis; and

(ii) also as above, as far as reasonably possible and subject to the most economical solution within the constraints of the technology deployed, the intervention will only be targeted at those premises of the postcode concerned that do not, or are not planned to, receive a service that would lead to them being mapped as NGA Grey.

The inclusion of partially covered postcodes may result in the unintentional effect of overspill of the publicly subsidised network to those premises already receiving an NGA service. This will most commonly occur where the solution deployed is to upgrade existing network infrastructure, for example a cabinet, and that cabinet is required to be upgraded to target those premises not receiving a NGA service and has the unintentional consequence of covering those that do. Such circumstances are foreseen by the EU Guidelines, whereby it is recognised that by seeking to cover unconnected neighbourhoods or districts (the 'white' areas) within a broader area in which some operators have already deployed their own network infrastructure or may plan to do so in the near future, that there may be the necessity to cover those areas already in receipt of coverage via the newly deployed infrastructure¹.

4.3 Approach to achieving a step change in availability

Any public sector investment in Broadband networks must achieve a step change in the network and in practice what this means is that any public intervention in broadband infrastructure must demonstrate the following:-

- Significant new investments in the broadband network
- That the new infrastructure brings both
 - significant capabilities to the market in terms of service availability, capacity and speeds (at least doubled); and
 - allows for effective access at different levels of the infrastructure.

The Intervention Area has been further defined to only include those areas that are unable to receive an affordable broadband service of at least 15Mbps so that the deployment of a subsidised NGA network can be targeted, bringing about a significant improvement in line access speeds. It has the effect of excluding from the Intervention Area those postcode areas that already can receive an affordable service with download speeds of at least 15 Mbps.

4.4 Approach to mapping of non-wired technologies

Mobile

Where services are advertised as being available using 3G mobile technologies, it is generally accepted that such technologies can deliver a basic (but not NGA) Broadband service. As there is no intention to utilise the Additional Funding to deploy basic broadband services, the classification or not of any postcode area as having access to these services will not affect the Intervention Area. These are also not mapped because whilst there is published information as to where a 3G signal can be obtained, there is little evidence publicly available as to where a consistent 2Mbps download speed can be reliably achieved. However, the absence of these services on the mapping should not be taken to suggest that these services are not present.

¹ Refer to the Broadband Guidelines Paragraph 26- <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2013:025:0001:0026:EN:PDF>

Additionally, to date we have not received any indication of coverage or plans to indicate that any 4G/LTE services will be available to enable this to be mapped as either basic or NGA broadband.

Wireless services

On a similar basis, there are wireless services present within Norfolk that provide a basic broadband service. However on the basis of the information received to date it has been difficult to accurately reflect the areas of coverage, those that are planned and not yet established. To reflect this, we have not as yet been able to map these areas as basic grey but have included these as 'conditional' white and will not include these areas within our plans for deployment of basic broadband at present. We will continue to work with the network operators to establish their coverage areas and plans so that we are able to take account of these prior to any deployment of basic broadband as part of the Initial Contract awarded under the Project.

Additionally, claims have been made in submissions to date that some wireless provision is in the process of being upgraded to meet NGA capability requirements. Evidence to substantiate these claims has not yet been provided and therefore these claims have not been reflected in the Intervention Area but we are continuing to work with infrastructure providers to verify the claims made.

Satellite services

We are aware that the whole of the area of Norfolk has the capability to be served by satellite services however, no response has been received to the providers that we have contacted to date. Whilst the presence of these services is acknowledged, these services have not been included on the coverage maps as the installation costs and in some cases the rental charges potentially make these unaffordable for consumers. Satellite broadband qualifies as a basic broadband technology but based upon the above does not impact on the definition of the Intervention Area.

4.5 Upgrading infrastructure to NGA and forward Projections

Where infrastructure providers indicate that the services they provide or plan to be provide are a NGA service, these must meet the criteria set out within the BDUK Technology Guidelines for NGA infrastructure. A copy of these guidelines can be found at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/236341/NGA_Technology_Guidelines_300813.pdf

In order to substantiate such provision or planned provision, we require prior to the closure of this consultation the following information:

- (a) accurate coverage mapping with evidence to reasonably verify the areas of coverage, taking into account issues of signal penetration and local topographical constraints;
- (b) technical Information, in line with the BDUK Technology guidelines, to allow assessment of whether infrastructure is NGA or Basic;
- (c) evidence that the prices, particularly for business users, are affordable; and
- (d) evidence of a business plan and detailed calendar deployment plan (where not operational) to give sufficient assurance of the sustainability of the proposals.

Please note that if such information is not provided, then it will not be possible for Norfolk County Council to verify the existence of, or intention to deploy, such services and accordingly the effect of this is that the Additional Funding may be used to subsidise NGA infrastructure which is competing with such services.

4.6 Early Market Engagement

Norfolk County Council carried out a market review in May and wrote to existing broadband providers. The list of suppliers contacted and those that responded to this review are given at Annex A. The results of this early market engagement have informed the coverage mapping with this consultation.

5 - CONCLUSION

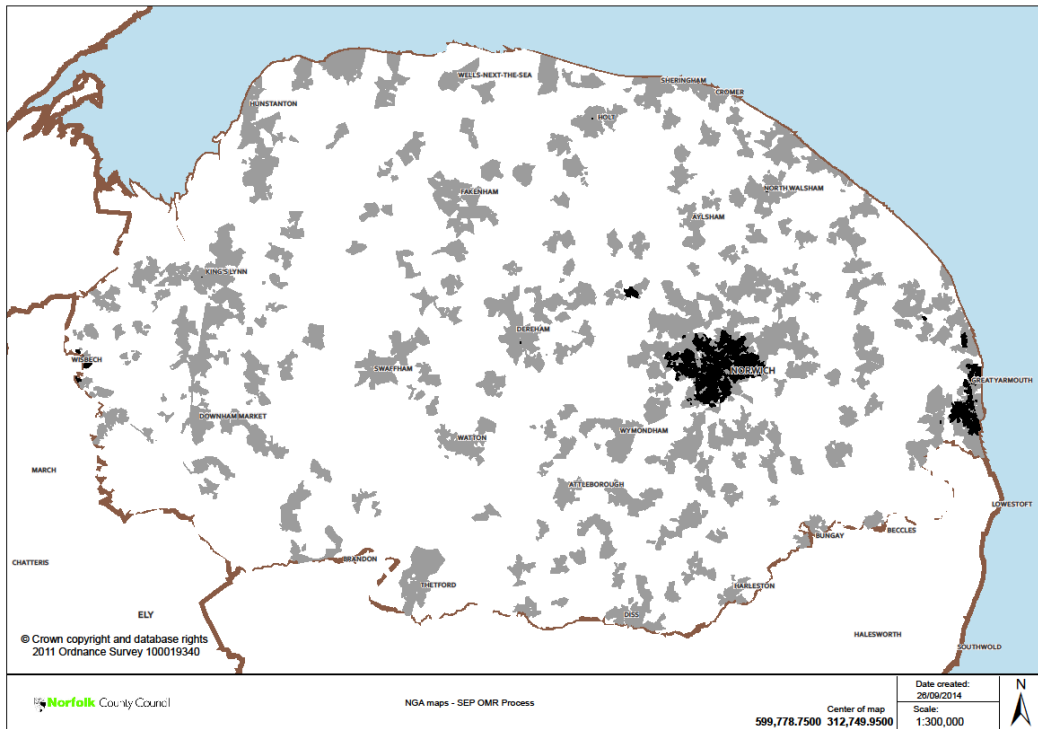
5.1 Description of proposed aid measure

The specifications for this project are described in Section 1.6 above. Norfolk County Council proposes to invest an initial sum of up to £19.18 million with the private sector provider selected by the procurement process described in this document, to achieve the objectives set out in Section 1.3, together with possible additional funding from communities (groups, individuals or businesses) seeking an 'uplift' from the solution offered as part of the Better Broadband for Norfolk Project.

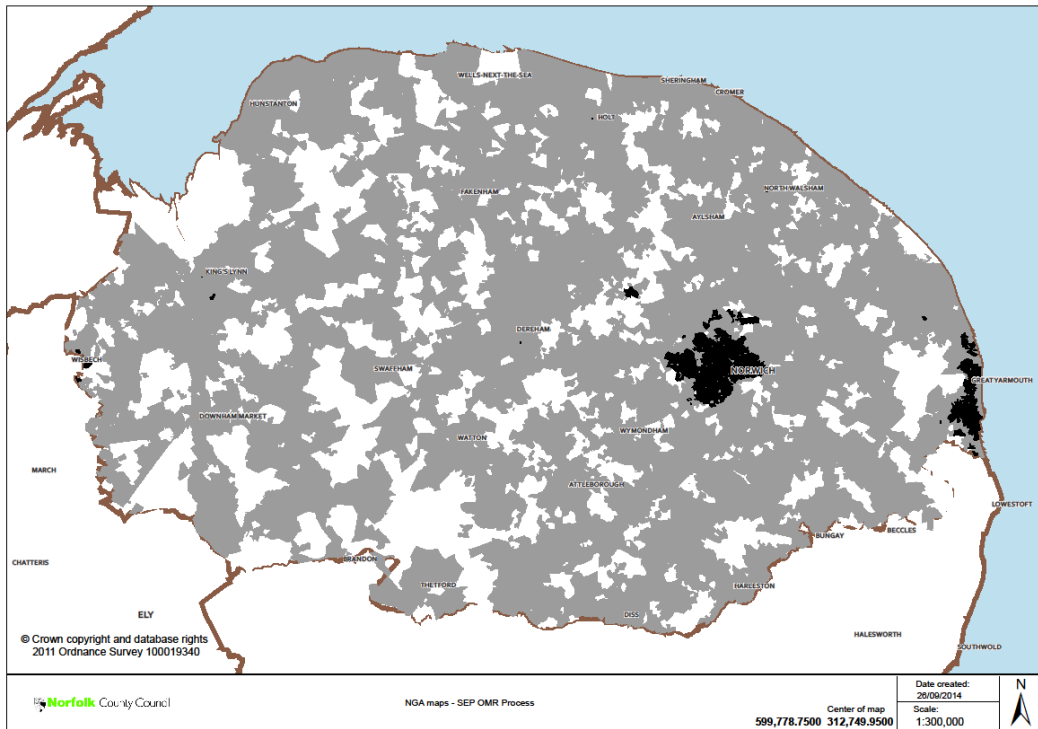
5.2 Proposed target areas

The areas that it is proposed to target for investment under this scheme are shown as the NGA White areas on Map A. For both Map A and Map B a list of the postcodes and their designation white/grey/black, as used to derive these maps, can be requested from BetterBroadbandforNorfolkProject@norfolk.gov.uk.

MAP A - NGA



MAP B - Basic



Additionally it may be a necessary consequence of deployment of some technologies to achieve NGA coverage, that a Basic service is delivered or enhanced in other areas, where there is an existing Basic broadband service (shown as Grey or Blank on the next map). For example, where FTTC is deployed, this may deliver NGA services to all premises within a certain distance of the cabinet, but those premises beyond that distance will receive an enhanced Basic service.

6 - FEEDBACK PROCESS

6.1 Consultation

Existing or potential broadband infrastructure providers/operators

The final target area for intervention will be based on the market analysis and feedback from this consultation. It is therefore imperative that any operator already delivering or planning to deliver services that exceed what has been detailed in this document make their offer/plans known. It is not our intention to duplicate the provision of NGA services by providers, nor is it our intention to provide subsidy where it is not needed. Please inform us where any of the information given in this consultation document or the attached maps is incorrect. If you wish to inform us of proposals for investment, we need to be assured that your proposed investment is credible and sustainable, and that it is planned to roll out the infrastructure within 3 years of the 18 July 2014. To this end, in accordance with EU Guidelines, we would require evidence in the form of a business plan and detailed calendar deployment plan before any changes to the scope of the project are considered.

Internet providers

In a similar way the council seeks feedback from other stakeholders and business involved in the provision of broadband services.

Other businesses and residents

The Council is also seeking feedback from residents and businesses about the accuracy of its coverage maps, in particular, areas that are designated as NGA broadband (NGA grey and black areas, if any) and also the accuracy of where there is currently basic broadband performance.

6.2 Contact

Responses should be sent by 5pm on 18 August 2014 to the Better Broadband for Norfolk Project at the following email address:

BetterBroadbandforNorfolkProject@norfolk.gov.uk

Please note that Norfolk County Council is subject to laws concerning access to information including the Freedom of Information Act 2000, the Environmental Information Regulations 2004 and the Audit Commission Act 1998 and may - notwithstanding any claim made by any person that any information is provided in confidence or is confidential in nature - release any information provided to it in accordance with the law, subject to the Council's discretion concerning any applicable exemption or the application of any public interest test.

7. Glossary of Terms

Term	Definition
Additional Funding	The additional public sector investment of up £19.18 million to be invested by the Project in improving Broadband infrastructure in Norfolk
Affordable	Access to basic broadband services is deemed not affordable if the installation cost is greater than £100 and/or the monthly rental cost is more than £25 and access to NGA broadband services is deemed not affordable if the installation cost is greater than £200 and/or the monthly rental cost is more than £50.
Basic broadband	Broadband which delivers download speeds of at least 2Mbps. Examples of basic broadband could include: ADSL (Asynchronous Digital Subscriber Line), ADSL2+, wireless, mobile and satellite. Basic broadband does not include narrowband (dial-up) Internet.
Basic White area	A postcode area where Basic broadband services at a minimum download speed of 2Mbps are not available at affordable prices and there are no private sector plans to deliver such services in the next three years.
Basic Grey area	A postcode area where one Basic broadband network already exists delivering affordable Basic broadband services at a minimum download speed of 2Mbps and there are no private sector plans to roll out similar infrastructure in the coming three years.
Basic Black area	A postcode area where two or more Basic broadband networks already (or are planned in the next three years to) exist delivering affordable Basic broadband services at a minimum download speed of 2Mbps.
BDUK	Broadband Delivery UK
BT	British Telecommunications plc
Commission Decision	The decision of the EU Commission of 21 November 2012 with reference <i>State aid SA.33671 (2012/N)</i>
EU	European Union

EU Guidelines	EU Guidelines for the application of State aid rules in relation to the rapid deployment of broadband networks (2013/C 25/01)
FTTC	Fibre To The Cabinet
Initial Contract	The initial call off contract entered into by Norfolk County Council with BT in December 2012 from the BDUK Broadband Delivery Framework Agreement.
Intervention Area	The area mapped as NGA White on Map A which is the area that will be subject to the Additional Funding.
Mbps or Mb/s	Megabits per second. References to broadband speeds are to download speeds unless otherwise stated.
Next Generation Access ("NGA") broadband networks	<p>NGA networks are access networks which are capable of delivering broadband access services with enhanced characteristics as compared to existing basic broadband networks. At current technological development and market availability these mainly rely wholly or partly on optical elements but may also include certain advanced wireless access technologies capable of delivering reliable high speeds per subscriber</p> <p>In either context NGA broadband must be capable of delivering download speeds of 30Mb/s or more or in any event more than 24Mb/s.</p>
NGA White area	<p>A postcode area where, either now or in the next three years:</p> <ul style="list-style-type: none"> - NGA broadband services are not available at affordable prices; and - it does not qualify as an NGA Grey or NGA Black area
NGA Grey area	<p>A postcode area where</p> <p>(a) one affordable NGA broadband network offering line access speeds of at least 15 Mbps already exists (for this purpose only the threshold of 15 Mbps is used to define the Intervention Area in order to ensure public sector investment is only targeted at areas where a sufficient step-change improvement of services is achieved, in accordance with the Commission Decision and the EU Guidelines); or</p> <p>(b) there are verified private sector plans to roll out a network as defined in (a) above in the coming three years.</p>

NGA Black area	A postcode area where two or more networks already exist meeting the criteria described for a NGA Grey area above.
Post code area	The area and premises covered by a six (or seven) digit postcode, for example, NR1 2DH.
Project	The Better Broadband for Norfolk Project.

Annex A

Satellite Networks

Alcatel Lucent	None
Arqiva	None
Avanti	None

Fixed Networks

Babcock Networks Ltd	None
BT	30-Jun-14
Cable & Wireless	None
CRB network	None
EADS	None
Easynet	None
City Fibre	None
Fujitsu Telecommunications	None
Geo Networks	None
Global crossing	None
H2O Networks	None
Horsebridge Network	None
Independent Fibre Networks Ltd	None

Siemens	None
Thales	None
Updata Infrastructure UK Limited	None
Virgin Media	06-Jun-14
Vtesse Networks	None
Mobile Networks	
Ericsson	None
Everything Everywhere (Orange/T-Mo)	None
H3G	None
Motorola	None
Vodafone	None
Retail Internet Service Providers	
BluOrb	None
BSkyB	None
Rural Broadband	None
Talk Talk	None
UK Broadband	None
Wireless Providers	
Networks by Wireless	None
ITsWisp	None
ThinkingWisp	06-Jun-14
WiSpire	05-Jun
Symmetris	03-Jun-14