Extending Superfast Broadband
Supplier Engagement

OCTOBER 2013
Version control

This presentation has been prepared following the issue of the Prior Information Notice (PIN) with the title “Broadband Delivery In-Fill Consultation” and should be read in conjunction with the PIN. This presentation does not constitute any commitment by DCMS or any local authority to initiate any formal procurement.

The information contained in this presentation is subject to change.

Presentation details

• Version 1-3: Published
• 7th October 2013
Introductions, agenda, objectives and funding

Chair
# Agenda

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<td>Welcome, introductions and objectives for the day</td>
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<td>11:15</td>
<td>Approaches and scenarios under consideration</td>
<td>Stephen Frith</td>
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<td>• Describing the challenge</td>
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<td>13:50</td>
<td>Next steps</td>
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Objectives of today

• To share current thinking on how to tackle the remaining superfast broadband challenges.
• To characterise what we think the challenges will look like.
• To present the general constraints on the programme, including those relating to State aid.
• To present the high level approaches under consideration.
• To understand the capability of suppliers and their solutions including capacity to deliver.
• To understand the circumstances under which suppliers would be willing and able to take part in any subsequent activities.
• To obtain evidence to help quantify costs, risks and benefits for appraisal of available options.
Background and context: Funding

June 2013 – HMT announcements:

- Investing up to £250 million, **locally match-funded**, to extend **superfast** broadband provision from current coverage plans so that 95 per cent of UK premises will have access to superfast broadband by 2017;
- Exploring with industry how to expand coverage further, using more innovative fixed, wireless and mobile broadband solutions, to reach at least 99 per cent of premises in the UK by 2018.

Source: Investing in Britain's future, June 2013

Funding is from April 2015 to March 2017
The current process

Stakeholder engagement

• Purpose
  – Present high level options.
  – Gather evidence from key stakeholder groups to contribute to an objective options appraisal.

• Key stakeholders and specific interests
  – Central government.
  – Local bodies and projects.
  – The supplier community:
    • This event and direct feedback.
    • Questionnaire.
Approaches and Scenarios

Stephen Frith
Describing the challenge

The scope of this programme of work is to target the group of premises which will not be able to receive Superfast Broadband services (defined as over 24Mbps) as a result of the commercial broadband deployments and on completion of the current BDUK intervention projects.
Describing the challenge

The challenge is what is left after current activity is finished:

• Commercial deployments:
  – Capable of delivering superfast services.
  – BDUK activity is based on responses to periodic Open Market Reviews (OMRs) of commercial activity from ALL providers.
  – Commercial deployments are on-going.

• BDUK Urban activity:
  – Voucher schemes to stimulate demand in 22 super-connected cities.

• BDUK Rural activity:
  – Call-offs from the Broadband Delivery Framework
  – Individual OJEU procurements run by devolved administrations and local bodies

• Local community schemes
High level delivery approaches

Approach 1 – New central procurement(s)
• Run a new central procurement or procurements inviting suppliers to bid to cover as much as possible of the remaining premises.
• Several procurement routes and commercial configurations are possible.

Approach 2 – Multiple procurements at a ‘more local’ level
• Facilitate and aid multiple smaller procurements inviting suppliers to bid to cover as much as possible of the remaining premises in a given area.
• Size could vary: Regional, local or both; not UK wide and more than one.
• Several procurement routes and commercial configurations are possible.

Approach 3 – Extend current arrangements
• Increase coverage through existing contracts.
• New call off activity.
Flexing the approaches: Scenario A

Central procurement emphasis:

• Majority of requirement aggregated centrally.
• New central competition(s).
• Additional local procurement activity.
• Local extensions to current arrangements.
Flexing the approaches: Scenario B

Emphasis on extending current arrangements:

• Maximise existing commercial arrangements.
• Additional local procurement activity.
• No new central procurement.
Flexing the approaches: Scenario C

Local balancing:

- Extend current arrangements.
- Local procurements, standardised as appropriate.
- Potentially aggregated to regional level to offer larger opportunities.
- Local bodies identify appropriate mix of approach.
Evaluation of approaches and timing of information
Timing of the approaches

• £250m available from financial year 2015/6 to 2016/17.
• Current state aid decisions expires June 2015
• Project outcomes (and hence no build areas) not fully known until 2015/16

Timing and next steps depend on chosen approaches:

• Approach 1 would require some time to set up and run a significant procurement (12-18 months) and so would need to commence soon.
• Approach 2 is already happening but is not coordinated (and hence market opportunity is fragmented).
• Approach 3 can commence now. Framework expires June 2014 unless extended.

Approaches are not completely mutually exclusive:
They are combined by both circumstance and strategic choice into various scenarios.
Example evaluation framework

Strategic assessment at this stage, likely to include:

1. Market capability / capacity / willingness to deliver.
2. Level of effective competition in the marketplace.
3. Outcomes in terms of speed coverage, quality, consumer choice, consumer pricing.
4. Integration with the existing route.
5. Risk to achieving targets within timescales.
6. Commercial sustainability.
7. Affordability to government and local bodies recognising funding constraints.
8. Alignment with devolved administration and local body objectives.
10. Compatibility with state aid, regulatory, procurement and legal frameworks.
11. Admin overhead costs and efficiency of delivery.
Evaluating delivery approaches

£

Subsidy per Premise Passed

Start point?

End point?

Current solutions (FTTC, FTTP, ?)

Alternative suppliers and / or technologies

National superfast coverage

90% 100%

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Certainty in coverage and location increases over time

- Availability of robust information to underpin procurement activity is recognised
- Timing and fitness for purpose is key
- Much of the local project activity is now getting underway and planning information is moving to deployment information
- Currently, most local projects are built up of phases

Improving certainty of outcomes during the phase
Data completeness: Local project level

- Phase commencement
- Surveys complete
- Build complete

Multiple phases:
- Desk-based planning
- Detailed surveys
- Build
- Operations data

Contract award:
- Engineer’s model

Accuracy of data vs. Time
Data completeness: Programme level

Location accuracy increases over time

- Projects may have up to 10 phases
- 42 projects are now underway
Summary so far

• Objectives:
  – To present the high level approaches under consideration.
  – To obtain evidence to help quantify costs, risks and benefits for appraisal of available options.

• Other stakeholders are also being consulted including local bodies and devolved administrations.

• 3 distinct scenarios under consideration:
  – New central procurement(s)
  – Extend existing arrangements
  – Blend of local procurement activity and extending existing arrangements
Background and context: Modelled and local outcomes

Mary James
Characterising the un-served areas

BDUK modelling

• Used to predict where current activities are likely to go
• Tracks real information as it becomes available
• Estimates the potential download speed delivered under different technologies
• Estimates the cost for reaching the remaining premises

How many do not have superfast and why

• There are no ‘typical’ features of an un-served area
• Different reasons for not having superfast
• In some areas the challenge will be significantly smaller than 10% of the premises; in others it will be larger
• Superfast not-spots will exist across urban, suburban and rural areas
Superfast Coverage (24Mbps) – UK Illustration

- For illustrative purposes only
- Actual location of delivered services will be different
- Preliminary estimate based on BDUK modelling:
  - line length modelling
  - cost modelling
  - Based on information provided by cable and FTTC suppliers.

Scotland
Up to 0.24m premises

England
Up to 2.4m premises

Wales
Up to 0.05m

Northern Ireland
In procurement

Superfast not spot (modelled)
Geographic sparsity

Our model currently suggests that the final 4% of UK premises account for 97% of the combined area without access to superfast services.
Oxfordshire broadband map

Understanding the map:
The map shows a preliminary estimate of the likely broadband coverage resulting from the County Council's broadband strategy. This map is indicative and should not be relied on or otherwise treated as a guarantee of current or future provision.

There are a number of things to be aware of when interpreting this map:
1. It is not necessarily the case that all premises within an upgraded area will receive an upgrade.
2. Different premises within an area may be served by different infrastructure.
3. Although an area may be served by upgraded infrastructure, the distance to this infrastructure may mean that some premises are below Superfast speeds of 24 Mbps.
4. The mapping data provided by the map is based on a number of assumptions which may change following a detailed on the ground assessment of local conditions. Further commissioning work and data monitoring are planned to enable significant improvements to the map. Any problems encountered will be noted in future updates to the map.

Commercial deployments

Intervention deployments

2Mbps – 24 Mbps

http://www.oxfordshire.gov.uk/cms/sites/default/files/folders/documents/communityandliving/BBmap.png
Oxfordshire broadband map

- Commercial deployments
- Intervention deployments
- 2Mbps – 24 Mbps

http://www.oxfordshire.gov.uk/cms/sites/default/files/folders/documents/communityandliving/BBmap.png
Background and context:
What is happening in North Yorkshire

Andy Lister
John Moore
Superfast North Yorkshire

- 46% coverage of NGA (>25/5) in North Yorkshire without intervention
- Competitive Dialogue that was competitive
- “Coverage was King” in terms of evaluation
- SFNY contract signed 17 July 2012
- FTTC and FTTP, significant impact of FTTC EO Cabinets
Superfast North Yorkshire

There are 379,757 premises in North Yorkshire

61% of NY premises have NGA (>25/5) as of today

91% coverage of the Intervention Area (176,610 premises) by June 2015

93% coverage (352,912 premises) of NGA in North Yorkshire by June 2015
The Challenge for Superfast North Yorkshire

18,122 premises at less than NGA in IA

Of these 18,122 premises:

• 10,000 premises less than 2Mbs
• 6,000 premises on EO lines

Policy objective of 99% NGA by 2017
Issues that keep us awake at night

- Technical and operational capability of operators (OSS/BSS/Billing/installation) in very rural areas (which are not flat....)
- Commercial sustainability of operators
- Attracting service providers, little evidence that mass market ISPs will use alternative operators
- FWA – availability of mast infrastructure, power and backhaul
And we are still awake:

- Public reticence about alternative operators
- Value for money, does 30Mbs set the bar too high?
- 100% coverage from any solution – no cherry picking
Background and context: State Aid Requirements

Tony Edge
State Aid - Overview

• State aid refers to any form of assistance from a public body which has the potential to distort competition and affect trade between members of the European Commission (EU).

• The EU monitors and controls State aid as member states are obliged to notify and seek approval from the Commission before granting State aid.

• The specific State aid rules for the rapid deployment of broadband networks is referenced on the Commission’s website.

• The approved National Broadband Scheme for the UK can be referenced on BDUK’s website.
## State Aid - Lifecycle

Public Bodies and Suppliers must follow the steps below in order to meet the conditions of the National Broadband Scheme:

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<tr>
<th>Public Body</th>
<th>Public Consultation</th>
<th>Sourcing</th>
<th>In Life</th>
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<tbody>
<tr>
<td><strong>Open Market Review</strong></td>
<td><strong>Public Consultation</strong></td>
<td><strong>Sourcing</strong></td>
<td><strong>In Life</strong></td>
</tr>
<tr>
<td>• Detailed coverage and mapping analysis – NGA.</td>
<td>• Publish NGA white/grey/black mapping.</td>
<td>• Open, transparent, non discriminatory.</td>
<td>• Maintain compliance.</td>
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<tr>
<td>• Issue to market.</td>
<td>• Seek feedback from stakeholders (residents, businesses, suppliers).</td>
<td>• Awarded to Most Economically Advantageous Tender.</td>
<td>• Make wholesale access available.</td>
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<td>• Technology neutral.</td>
<td>• Deal with additional wholesale access requests.</td>
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<td>• Targeted at NGA white areas.</td>
<td>• Transparency of the deployed infrastructure.</td>
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<td>• Seeks to make use of existing assets/infrastructure.</td>
<td>• Clawback.</td>
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<td>• Step change - significant new investment in passive infrastructure and doubling speeds.</td>
<td>• Reporting.</td>
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<td>• Price benchmarking.</td>
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Compatibility with National Broadband Scheme State Aid Decision

Step Change – BDUK NGA Technology Guidelines Requirement

- Any solution must deliver a ‘step change’ in network capability and service availability and consistently provide a high quality experience to end users.

- Where FWA networks are deployed, there shall be a commitment to upgrade to fibre components at a later stage if it becomes economically viable.

1 Minimum 15Mbps to end users for 90% of the time at peak times.
### Minimum wholesale access requirements

<table>
<thead>
<tr>
<th>Technology</th>
<th>Minimum acceptable access</th>
<th>Recommended additional/alternative access</th>
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| **Fibre to the home or building (FTTH/FTTB)** | One point of physical access: i.e. either duct access or dark fibre on new subsidised infrastructure.  
• One point of active access:  
  – In case of deployment of a point to point network infrastructure full physical unbundling.  
  – In case of deployment of a point to multipoint infrastructure VULA Equivalent.  
• Other wholesale access if mandated by Ofcom as a regulatory remedy. | • Multiple points of physical access, e.g. both duct access and dark fibre.  
• Splitter access.  
• White label. |

| **Fibre to the cabinet/node (FTTC/N)** | One point of physical access: i.e. either duct access or dark fibre on new subsidised infrastructure.  
• One point of active access: i.e. VULA Equivalent.  
• Other wholesale access if mandated by Ofcom as a regulatory remedy.  
• SLU if sub loop deployed as part of subsidised project. | • Multiple points of physical access, e.g. both duct access and dark fibre.  
• Cabinet space and power.  
• White label. |
## Minimum wholesale access requirements

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<tr>
<th>Technology</th>
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<th>Recommended additional/alternative access</th>
</tr>
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</table>
| Power line                              | • No point of physical access required (physical access already provided by DNO).  
                                          • One point of active access: i.e. VULA equivalent.                                                                                                           |                                                                                                             |
| Wireless/mobile                         | • Access to the backhaul network.  
                                          • Mast access.  
                                          • Either Bit-stream or White label.                                                                                                                              |                                                                                                             |
| Satellite                               | • Either Bit-stream or White label.                                                                                                                                                                                      |                                                                                                             |
| Cable (DOCSIS v3.0)                     | • One point of physical access: i.e. either duct access or dark fibre on new subsidised infrastructure.  
                                          • One point of active access: i.e. VULA equivalent.                                                                                                           | • Multiple points of physical access, e.g. both duct access and dark fibre.  
                                          • Head end space and power.  
                                          • White label.                                                                                                                                               |
| New Duct and New Poles (or other passive network elements) | • Wholesale open access: New ducts and poles shall supply of any type of wholesale local access and backhaul service used to supply residential and business markets.                                                      |                                                                                                             |
State Aid

- The Commission is obliged to recover any aid that has not been properly notified and approved by the Commission.
- Where it is deemed that illegal aid has been provided this will be recovered from the beneficiary which in the case of broadband projects is the Supplier.
- BDUK Guidance on the use of the National Broadband scheme can be referenced at https://www.gov.uk/broadband-delivery-uk#state-aid
- For further guidance: stateaidforbroadband@culture.gis.gov.uk
Discussion
Summarising the challenge

- **Dispersed and fragmented**
  - UK wide.
  - Often small and non-contiguous.

- **Not always 10%**
  - Forecast superfast coverage varies across local projects.
  - Potentially reducing: Commercial deployment activity and Rural intervention activity is on going.

- **Complex delivery**
  - Commercial obstacles, e.g. planning and way leaves.
  - Technical and procedural problems.

- **Timing of coverage**
  - The un-served areas become more defined as current activity progresses.

- **Location not yet fixed**
  - Recently procured projects are in survey and planning phases.
  - Location of un-served premises will become clearer.
Delivery scenarios - reminder

**Scenario A**
Central procurement emphasis

**Scenario B**
Emphasis on extending current arrangements

**Scenario C**
Local activity balanced against extending current arrangements

**Alternatives?**
Discussion topics 1

• Questions on material presented.
• Any other delivery approaches and scenarios.
• Optimising the blend of approaches:
  – Attractiveness of central procurement.
  – Scalability of multiple non-central procurements.
  – Impact of extending framework activities.
• Pros and cons of the different delivery scenarios
Discussion topics 2

• What influences the attractiveness of opportunity to new suppliers:
  – Investment required from suppliers.
  – Scale of opportunity.
• What are the barriers to participation, and what is the ask of Government?
• Will other commercial models come become more appropriate as the cost of delivery rises?
• How to design any procurement process:
  – Procurement lots? Is scale everything, or does the scope and location need to be carefully targeted to maximise competition
• What will make consumers switch to a new network? What could / should Government do to attract major ISPs to new networks?
• How much will it cost to deliver?
Next steps

Supplier questionnaire
• Available on line from 8\textsuperscript{th} October 2013.
• Response requested by 23\textsuperscript{rd} October 2013.

Evidencing the potential propositions
• Sufficient detail requested to enable us to present feedback from this supplier engagement on an objective basis to ministers.

Timescales
• Consolidating supplier feedback – October 2013.
• Local authority and devolved administration consultation – October 2013.
• Options appraisal – during November 2013.