



National Audit Office

---

**Memorandum**

for the House of Commons  
Committee of Public Accounts

---

**Department for Culture, Media & Sport**

The Superfast (Rural) Broadband  
Programme: update

**JANUARY 2015**

---

---

Our vision is to help the nation spend wisely.

Our public audit perspective helps Parliament hold government to account and improve public services.

The National Audit Office scrutinises public spending for Parliament and is independent of government. The Comptroller and Auditor General (C&AG), Sir Amyas Morse KCB, is an Officer of the House of Commons and leads the NAO, which employs some 820 employees. The C&AG certifies the accounts of all government departments and many other public sector bodies. He has statutory authority to examine and report to Parliament on whether departments and the bodies they fund have used their resources efficiently, effectively, and with economy. Our studies evaluate the value for money of public spending, nationally and locally. Our recommendations and reports on good practice help government improve public services, and our work led to audited savings of £1.1 billion in 2013.

---

---

# Contents

**Overview** 4

**Part One**

Introduction 8

**Part Two**

Publishing information on broadband coverage and speed 12

**Part Three**

Phase 1 cost data: informing phase 2 procurement 14

**Part Four**

Promoting competition 20

**Part Five**

Phase 1 progress and phase 2 early progress 24

**Appendix One**

Our previous recommendations, and those of the Committee of Public Accounts 28

This report can be found on the National Audit Office website at [www.nao.org.uk](http://www.nao.org.uk)

For further information about the National Audit Office please contact:

National Audit Office  
Press Office  
157–197 Buckingham Palace Road  
Victoria  
London  
SW1W 9SP

Tel: 020 7798 7400

Enquiries: [www.nao.org.uk/contact-us](http://www.nao.org.uk/contact-us)

Website: [www.nao.org.uk](http://www.nao.org.uk)

Twitter: @NAOorguk

Links to external websites were valid at the time of publication of this report. The National Audit Office is not responsible for the future validity of the links.

---

# Overview

**1** The government has made broadband internet provision a policy priority, citing the economic and social benefits. The Department for Culture, Media & Sport (the Department) is responsible for the government's broadband policies. Broadband Delivery UK (BDUK) – a unit within the Department – runs several programmes to provide superfast broadband and better mobile connectivity to the UK. One of these is the Superfast Broadband Programme (formerly the Rural Broadband Programme), which it has designed to provide superfast broadband across the UK in 3 phases:

- Phase 1 is to extend superfast broadband coverage to 90% of UK premises by December 2016, with £530 million of central government funds.
- Phase 2 is to extend superfast broadband coverage to 95% of UK premises by December 2017, with a further £250 million of central government funds.
- Phase 3 is to test options for rolling out superfast broadband past 95% coverage, with pilot projects complete by March 2016. Funding for the pilots is £10 million.

**2** We reported on *The Rural Broadband Programme* in July 2013. That report looked at the early procurement stages of phase 1 of the Superfast Broadband Programme (the Programme), and the prospect for getting value for money given the adequacy of the Programme's controls and progress so far. The Committee of Public Accounts has since published 2 reports: the first in September 2013 and the second in April 2014. Both reports highlighted concerns over:

- publishing superfast broadband rollout information;
- cost data being available and transparent; and
- the level of competition secured.

**3** This memorandum outlines progress on those specific issues the Committee of Public Accounts raised. We also give a brief update on the Programme's overall progress.

## Progress

### Rollout plans: availability and quality

**4** Many more local bodies (a local authority, group of local authorities, devolved government or local economic partnership) have published detailed information on broadband coverage and expected rollout. All local bodies have published either maps or postcode checkers, so consumers and businesses can identify current and planned coverage within local bodies. Most local bodies have published both. There remains some variability in the quality of the maps. Recently, the Department has also published a national postcode checker that allows the public to find out the availability of superfast broadband in their area.

### Cost data

**5** BDUK has advised and supported local bodies in managing in-life controls such as standardised reporting of costs and outputs over phase 1 of the Programme. BDUK's analysis of cost data for phase 1 showed that BT's reported capital costs are so far £142 million lower than in its original bids, including £34 million in project management costs. However, BT has provided some of the cheaper and easier street cabinets so far, so costs are likely to increase as it starts to build the more complex solutions. BDUK's experience of actual costs in phase 1 has led to BT agreeing to submit lower costs in its financial model for phase 2, which will reduce the amount of public funding required.

**6** To understand whether BT's contracts were economically priced, BDUK commissioned Atkins to do a small-scale trial cost comparison exercise. In January 2015 this exercise reported that, for specific infrastructure in one location, BT had charged the public sector approximately 20% less than the estimated cost for an alternative supplier.

**7** BDUK has not omitted confidentiality clauses from phase 2 contracts as the Committee had hoped. However, BDUK considers it gets enough assurance from its actual cost comparisons of local authority data. The Major Projects Authority recently cited the BDUK's 'Milestone-to-Cash' process, linking payments to project completion milestones, as an example of best practice in controlling costs. Local bodies have also reported that they have found the cost comparison reports useful.

## Competition

**8** The Committee's third concern was on getting more competition from future BDUK broadband funding. Despite the limited competition in phase 1, BDUK did not prepare a separate business case to decide the best delivery model for phase 2. It did engage with the market and explore several options, but it did not fully develop or cost these options. In BDUK's view doing so would have led to the same outcome but would have delayed the phase 2 rollout. Once BDUK had decided to use the same delivery model as phase 1, local bodies undertook market engagement to identify potential suppliers. They also conducted open market reviews and consultations to identify other planned coverage. In the end, 43 of 47 local bodies have opted to use BDUK's procurement framework for most or all of their phase 2 funding. Phase 2 will therefore have limited competition, as BT is now the only participant on the framework. However, 10 local bodies which have chosen to use the framework are considering keeping a minority of their funding back, which they may use for other procurements outside of the framework.

**9** Overall, the effect of the first 2 phases will be to reinforce BT's already strong position in the wholesale market for broadband infrastructure (the Wholesale Local Access Market). BT's assets and infrastructure will benefit from approximately £1.7 billion of public sector investment although BT must maintain these assets at its own expense. BT is also required by regulatory conditions to provide wholesale access to other suppliers.

**10** Phase 3 had significant competition for the pilot projects to test how to bring superfast broadband to the final 5% of the UK. BDUK has also been working on how to maximise how the public sector uses its network infrastructure assets.

## Phase 1: progress

**11** Phase 1 of the Programme is progressing well. It is on track for superfast broadband to reach 90% of premises by early 2016. So far, significant cost savings and higher than predicted take-up should bring greater coverage than contracted, as local bodies will be able to extend their rollout with remaining funds.

## Looking ahead

**12** It is likely that if the government commits funding for superfast broadband for the final 5% of premises, it will use alternative technologies and funding models much more, which should increase competition. BDUK must manage smaller suppliers' needs, to use any extra future funding effectively. BDUK should then be in a stronger position to negotiate favourable contractual terms while balancing the specific challenges associated with using smaller suppliers.

**13** BDUK's value-for-money controls are an important safeguard against the possibility of a supplier charging unreasonable costs. Its detailed review of phase 1 costs will bring savings in phase 2 bid pricing. And the pilot cost comparison exercise commissioned by BDUK found that BT had charged the public sector approximately 20% less than the estimated cost for an alternative supplier. BDUK intends to strengthen its assurance that BT's contracts were economically priced further by repeating this 'should cost' exercise in other locations and for other solutions.

**14** Take-up of superfast broadband so far has been significantly faster than forecast by BT in the phase 1 contracts. Take-up has risen to more than 20% already for 2 non-framework projects. Both BT and the public sector will share the benefits of any extra profit resulting from higher take-up for the first 7 years after rollout through the contract's clawback clause. After these 7 years, the supplier will keep all of the extra wholesale profit. Funds that are clawed back because of greater take-up can be reinvested. BDUK will need to help local bodies to reinvest funds while they are contracting and rolling out their phase 2 projects.

# Part One

## Introduction

**1.1** Broadband is 'always-on' internet access named because of its bandwidth – the total data transferred per second. Broadband provision is measured in millions of bits per second (Mbps). When the bandwidth achieves a certain level this is 'superfast' broadband. The Department for Culture, Media & Sport (the Department) has defined superfast broadband as a bandwidth of 24 Mbps or more.

**1.2** Commercial operators such as BT and Virgin are rolling out superfast broadband where profitable. As at December 2014, the commercial rollout of superfast broadband was expected to reach approximately 76% of UK premises. But the commercial case for providing similar services to the remaining, often rural, communities is more challenging. Higher infrastructure costs and lower population density may make it unprofitable for potential suppliers to invest.

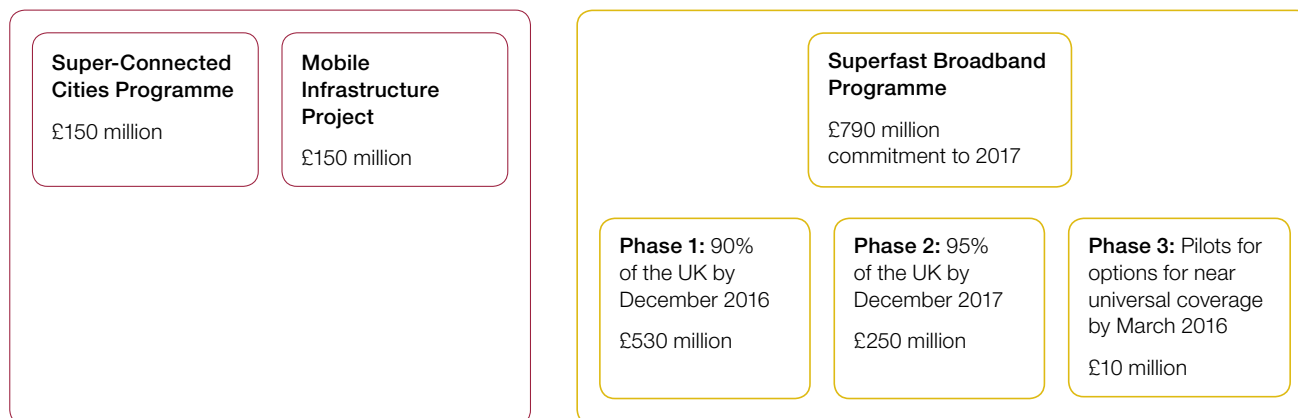
**1.3** The government has made broadband internet provision a policy priority, citing the many economic and social benefits. Given this importance, the government intervened in the market and gave public subsidy to suppliers to provide superfast broadband to areas where provision is not commercially viable. The Department manages the government's broadband policies.

**1.4** A unit within the Department – Broadband Delivery UK (BDUK) – carries out the government's broadband programmes. BDUK manages a portfolio of programmes to provide superfast broadband and better mobile connectivity to the UK. These are the Super-Connected Cities Programme, the Mobile Infrastructure Project, and the Superfast Broadband Programme (formerly the Rural Broadband Programme). The last of these has 3 separate phases (**Figure 1**).



**Figure 1**

BDUK's programmes for superfast broadband and better mobile connectivity



  Out of scope of memorandum

  Covered by National Audit Office update memorandum

Source: National Audit Office

## The Superfast Broadband Programme

**1.5** BDUK manages the Programme for the Department. BDUK designed the Programme to get superfast broadband to areas, predominantly rural, where commercial providers had no plans to invest. The Department has committed £790 million of central government funding to the Programme, set out over 3 phases (**Figure 2** overleaf).

**1.6** Phases 1 and 2 of the Programme involve the Department giving grant funding to local bodies (a local authority, group of local authorities, devolved government or local economic partnership). There are 44 local bodies in phase 1 and 47 in phase 2.<sup>1</sup> These local bodies procure the infrastructure for superfast broadband for their areas. The Department developed a framework contract which local bodies can use to buy the services from a supplier. BT and Fujitsu were appointed as framework suppliers, although Fujitsu did not bid for projects and withdrew prior to phase 2. Local bodies may also procure the infrastructure for superfast broadband without using the framework. BDUK advises and supports each local body during procurement and subsequent contract management. Local bodies must generally provide matched funding to the central government grant, and can also add extra money if they want. Total estimated public sector funding for phases 1 and 2 is approximately £1.7 billion. Both phases 1 and 2 use a gap funding model, where the gap is the public contribution required to supplement a supplier's investment in broadband infrastructure to make a project commercially viable.

<sup>1</sup> The 44 local bodies are listed in Figure 4 of our July 2013 report. The 47 local bodies include many of the same bodies as for phase 1. Local bodies in phase 2 but not phase 1 include Cornwall, Cotswolds and Black Country.

**Figure 2**

## The Superfast Broadband Programme's objectives

Phase	Objective	BDUK funding	Project approach	Target delivery date
Phase 1	To secure delivery of superfast broadband to 90% of UK premises by December 2016.	£530m	44 projects run by local bodies	December 2016
Phase 2	To extend delivery of superfast broadband to 95% of UK premises by December 2017.	£250m	47 projects run by local bodies	December 2017
Phase 3	To test options to rollout superfast broadband to the final 5% of the UK.	£10m	8 pilot projects with different suppliers	March 2016 (pilot stage only)

Source: National Audit Office review of BDUK documentation

**1.7** BDUK talked to potential suppliers in 2013, and those discussions indicated that the Department would need new solutions to extend superfast broadband coverage beyond 95%. BDUK designed phase 3 of the Programme to test the options to rollout superfast broadband to the final 5% of UK premises. In June 2014, following bids from 26 suppliers, BDUK contracted directly with 8 suppliers to trial several technologies and operating models to get superfast broadband to the hardest-to-reach communities. Pilot projects that are successful in their feasibility stage will run until March 2016. BDUK is funding these projects, with support from those local bodies that have agreed to host the pilot projects.

**Previous work and scope of this review**

**1.8** In July 2013, we published a value-for-money study looking at phase 1 of the Rural Broadband Programme.<sup>2</sup> At that time about half the local bodies had completed their procurement. Rollout was still in early stages, even for local bodies that had been first to sign contracts. We did not conclude on whether the Programme had been value for money. Instead we examined how well the Department designed the Rural Broadband Programme and the extent to which the combined set of safeguards would give assurance about the value for money of the subsidy. We also considered the Department's progress in its Programme. Our report concluded that the Programme lacked competitive tension and strong assurance over costs. Therefore, ensuring value for money would rely heavily on the quality of the in-life contract controls the Department designed for the Programme. We also pointed to early delays in the Programme's procurement phase.

<sup>2</sup> Comptroller and Auditor-General, *The Rural Broadband Programme*, Session 2013-14, HC 535, National Audit Office, July 2013.

**1.9** The Committee of Public Accounts held a hearing in July 2013 and a follow-up hearing in January 2014 on this topic. The Committee set out its concerns in 2 reports.<sup>3</sup> Concerns included the lack of competition in contracts, and whether the contracts, including the supplier contribution and contractual terms, were good value for money. Concerns also covered a lack of transparency over BT costs and limited published information about planned rural broadband coverage and speed.

**1.10** This memorandum gives an update on 3 specific issues where the Committee felt the Department needed to progress further following the government's latest Treasury Minute response.<sup>4</sup> These are:

- publishing coverage and speed information for phase 1;
- using cost information collected for phase 1, and how this is informing contract negotiations for phase 2; and
- how BDUK has promoted competition, including reasons for its procurement approaches for phases 2 and 3, and how much competition it has secured.

This memorandum gives an update on the Programme's progress, including on rollout and take-up of superfast broadband under phase 1 and comments on initial progress for phase 2. We do not provide a wider assessment of the Programme, or reach a value-for-money conclusion.

<sup>3</sup> HC Committee of Public Accounts, *The rural broadband programme*, Twenty-fourth Report of Session 2013-14, HC 474, September 2013 and HC Committee of Public Accounts, *The rural broadband programme*, Fiftieth Report of Session 2013-14, HC 834, April 2014.

<sup>4</sup> Treasury Minute, *Government response on the Fiftieth Report from the Committee of Public Accounts*, Session 2013-14, Cm 8871, June 2014.

## Part Two

### Publishing information on broadband coverage and speed

**2.1** Publishing detailed information on broadband coverage and speed is important. Potential suppliers planning broadband projects find maps useful in finding out where others already intend to operate, so they can plan their own projects to best effect. Individuals may want to know when they will get superfast broadband, and may use a postcode checker to find out.

**2.2** The Committee of Public Accounts heard in its previous sessions that BT considers the detailed speed and coverage templates in its contracts with local bodies to be commercially confidential. Potential competitors also said that other projects were stalling because they could not get funding from other sources without information to show that their proposed programme did not threaten competitors' existing plans. BT said at the January 2014 hearing that it did not object to local bodies publishing detailed rollout plans and would support them to do so.

**2.3** In 2014, Broadband Delivery UK (BDUK) worked with local bodies on making detailed and high-quality rollout information available. The detailed information forms part of the contract between local bodies and BT, so BDUK would not release the data itself. However, BDUK used several methods to encourage local authorities to publish information. The Department has written 3 letters to senior staff at local bodies, in July 2013, February 2014 and July 2014. These letters encouraged local bodies to publish data, and offered support to do so. BDUK and local bodies also got a 'letter of comfort' from BT that it will not take legal action against local bodies that use coverage data from the speed and coverage templates to support published maps and postcode checkers.<sup>5</sup> BT and local bodies formalised this agreement in contract variations. Finally, BDUK includes this topic in its regular update calls and visits with local bodies.

**2.4** In January 2014 BT told the Committee that 40 out of 44 local bodies had published some information on broadband coverage, typically as maps. However, the maps' quality varied, with many not showing detailed plans. We looked at published maps and postcode checkers as at January 2015. **Figure 3** shows the results.

<sup>5</sup> In allowing local bodies to publish detailed rollout information, BT stipulated that local bodies must not publish wider project deployment data and must recognise that deployment plans could be subject to change, for example following detailed survey work by BT.

**Figure 3**

Availability of rollout information on phase 1 projects, at 1 January 2015

<b>Availability of maps and postcode checkers</b>	<b>Number of local bodies</b>
Postcode checker and detailed mapping	30
Postcode checker and less detailed mapping	10
Postcode checker only	2
Enhanced detail mapping only	2
<b>Total</b>	<b>44</b>

Source: National Audit Office analysis

**2.5** Since the January 2014 Committee hearing both the availability and quality of rollout plans has improved. All local bodies now have information about rollout on their websites using either mapping or postcode checkers. Of 44 project websites, 42 had a map, and 42 had postcode checkers. There is still variation in the detail in rollout maps. Many maps had much detail, with postcode data sometimes shown to street level. Our analysis showed that two-thirds (30) of local project websites now have both detailed maps and postcode checkers. Only a quarter of projects have not published detailed maps, although they had postcode checkers. Most project websites had summary information on areas that would get superfast speeds. Some local bodies also provide information such as which specific BT street cabinets have been, or are scheduled for, an upgrade.

**2.6** BDUK launched an advertising and marketing campaign in December 2014 to encourage greater consumer take-up of superfast broadband. This campaign gives one central postcode checker with current information on superfast broadband coverage, to improve the information available.<sup>6</sup>

6 The website for this postcode checker is at [www.gov.uk/gosuperfast](http://www.gov.uk/gosuperfast)

## Part Three

### Phase 1 cost data: informing phase 2 procurement

**3.1** The Committee of Public Accounts' September 2013 and April 2014 reports raised concerns over the cost transparency of BT's bids. It questioned whether Broadband Delivery UK (BDUK) had enough assurance that BT's calculation of the bid costs and the public subsidy needed to make the funding commercially viable were reasonable.

**3.2** Our previous work found the Department for Culture, Media & Sport (the Department) had limited transparency over BT's forecast costs in its model. Also, a non-disclosure agreement in the contract prevented local bodies from sharing cost information. BDUK did compare tender prices between local bids, which helped local bodies. However, the analysis lacked unit costs, a comprehensive 'should cost' model, or wider benchmarks for many costs. During the project, BT may only claim for evidenced eligible expenditure, which helps to safeguard public funds. The Committee remained concerned that in-life controls do not affect whether the costs were economically priced in the first place. The Department assured the Committee that it would review the non-disclosure agreements and would collect detailed deployment costs once available.

**3.3** In this review we followed up on previous concerns by looking at cost information so far and how these data inform phase 2 bids. We did not do a detailed review of whether BDUK's in-life controls are acceptable. Rather, we looked at BDUK's analysis of the available cost data.

## **BDUK's in-life controls over phase 1 costs**

**3.4** Now that phase 1 of the Superfast Broadband Programme (the Programme) is in delivery, BDUK has strengthened its value-for-money team and its work on in-life controls. Local bodies pay BT on the basis of a 'Milestone-to-Cash' process to get assurance over the payments for milestones, which promotes good cost control. BDUK has access to detailed cost information collected on each of the local projects that used the BDUK procurement framework.<sup>7</sup> BDUK's value-for-money team is highly skilled. Its support to local bodies includes:

- a standardised assurance approach that directly links each project's deliverables and costs required for these, supported by guidance and checklists;
- review of key processes and controls that underpin the supplier's key costs, including guidance for local bodies on how to build project management cost forecasts;
- visits to all local bodies to assess and support assurance processes;
- regional meetings and regular briefings and clinics which allow BDUK to promote best practice, share knowledge, discuss common issues and to give advice.
- quarterly cost comparison reports for each local project, which compare key measures against the equivalent data from all local bodies (supplemented by BDUK's value-for-money team having individual tailored discussions on these reports).

**3.5** The Major Projects Authority carried out a project assessment review in autumn 2014. It concluded that "The 'Milestone-to-Cash' process should be disseminated across Whitehall, as appropriate, as an exemplar of best practice".<sup>8</sup>

## **Phase 1 actual cost data**

**3.6** The contracts between BT and local bodies require BT to bear the risk of overspends, so these contracts effectively set BT's maximum claim amount for each project. It therefore made good financial sense for BT to include some contingency in its bids. BT told the Committee in July 2013 that it typically included 5% to 8% contingency in project bids.

**3.7** BDUK's analysis of the cost information it has received suggests that so far actual phase 1 costs are significantly lower than BT's financial model. As at September 2014, BT's total reported capital spend on phase 1 of the Programme was £142 million (38%) under the estimated price, including work in progress not yet invoiced. BDUK estimates that this £142 million variance reported so far is likely to be reduced by between £30 and £50 million. This is partly because of timing issues, as BT's financial model profiled average unit costs, rather than profiling projected specific unit costs. There are also some possible further costs not yet charged by BT. But even if all of these costs materialise, BT would still have spent approximately £92 million (25%) less than its contracted forecast cost.

<sup>7</sup> BDUK detailed data exclude the following projects, which are not following the 'milestone to cash' process: Wales, Lancashire, Surrey, Rutland, Northern Ireland, North Yorkshire, Herefordshire and Gloucestershire, Cumbria and Cheshire.

<sup>8</sup> Major Projects Authority, *Project Assessment Review: Broadband portfolio*, October 2014.

**3.8** Phase 1 costs are so far lower than BT's model in all categories (**Figure 4**):

- **Fibre to the cabinet costs**

Street cabinets are a link between individual premises, which often have copper telephone wires, and fibre-optic cable in the wider network. BDUK calculated the average cost per cabinet as at September 2014 at £21,100, which is markedly lower than the average bid cost per cabinet of £28,900 calculated in July 2013.<sup>9</sup> BT has rolled out 26% of cabinets, covering 22% of premises. However, BT has provided some of the cheaper and easier cabinets so far. The average cost may increase as BT builds the more complex cabinets, so it is difficult to estimate final costs at this stage.

- **Fibre to the premises costs**

BT's model spread the costs of enabling fibre-optic cable direct to premises evenly throughout the project, whereas it actually planned to build more towards the project end. Even where projects are almost complete, BDUK reports that BT's rollout programmes are using street cabinets more than its original model planned and less fibre direct to premises. This change is likely to reduce total project costs, as providing fibre directly to premises is, on average, more expensive than installing street cabinets.

- **Other capital expenditure (includes improvements to BT's incremental core network to support BDUK deployment)**

BDUK analysis shows that expenditure is less than half of the bid model costs.

- **Project management costs**

BDUK has accrued £33.7 million of savings to September 2014 compared with BT's projected project management costs. (**Figure 5** on page 18). BDUK predicts total savings of approximately £72 million by 2017-18. These savings have arisen partly due to economies of scale and synergies from running all 44 contracts, and due to the standardised approach to 'milestone-to-cash' reporting. Actual project management costs charged by BT are very similar to estimates prepared by local bodies of what project management costs would be appropriate. This gives confidence that BDUK's estimated saving on project management costs looks reasonable.

**3.9** Several factors may yet affect any final difference between BT's bid costs and actual costs claimed, including the exact technical solutions used. However, BDUK predicts that significant overall cost savings are likely. Such savings will suggest how effective BDUK's in-life controls were, and reflect the contingency BT built into the bids to take account of the risk it bears.

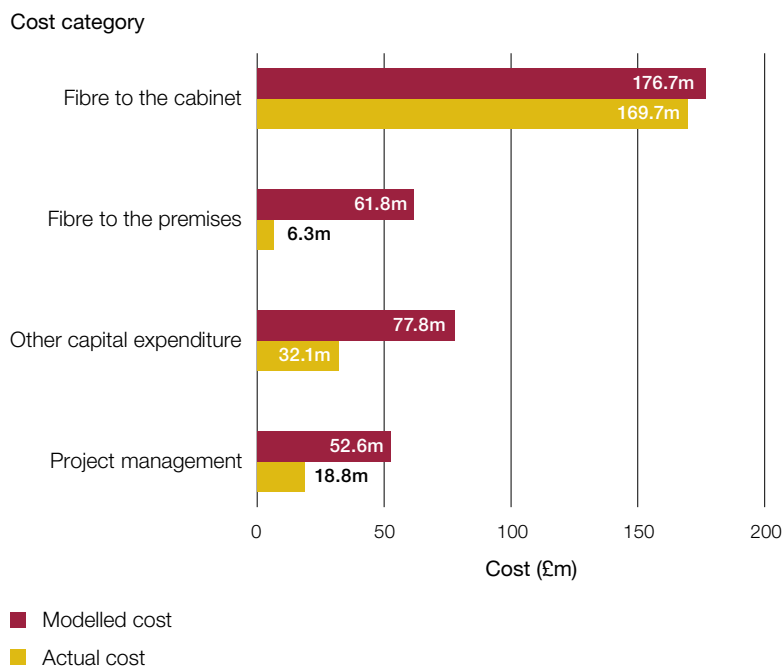
<sup>9</sup> The average cost per cabinet in bids was based on the 18 English local body bids received by July 2013.



**Figure 4**

BDUK's analysis of BT's actual versus modelled capital costs, at September 2014

**Actual costs claimed are lower than those modelled in all categories**

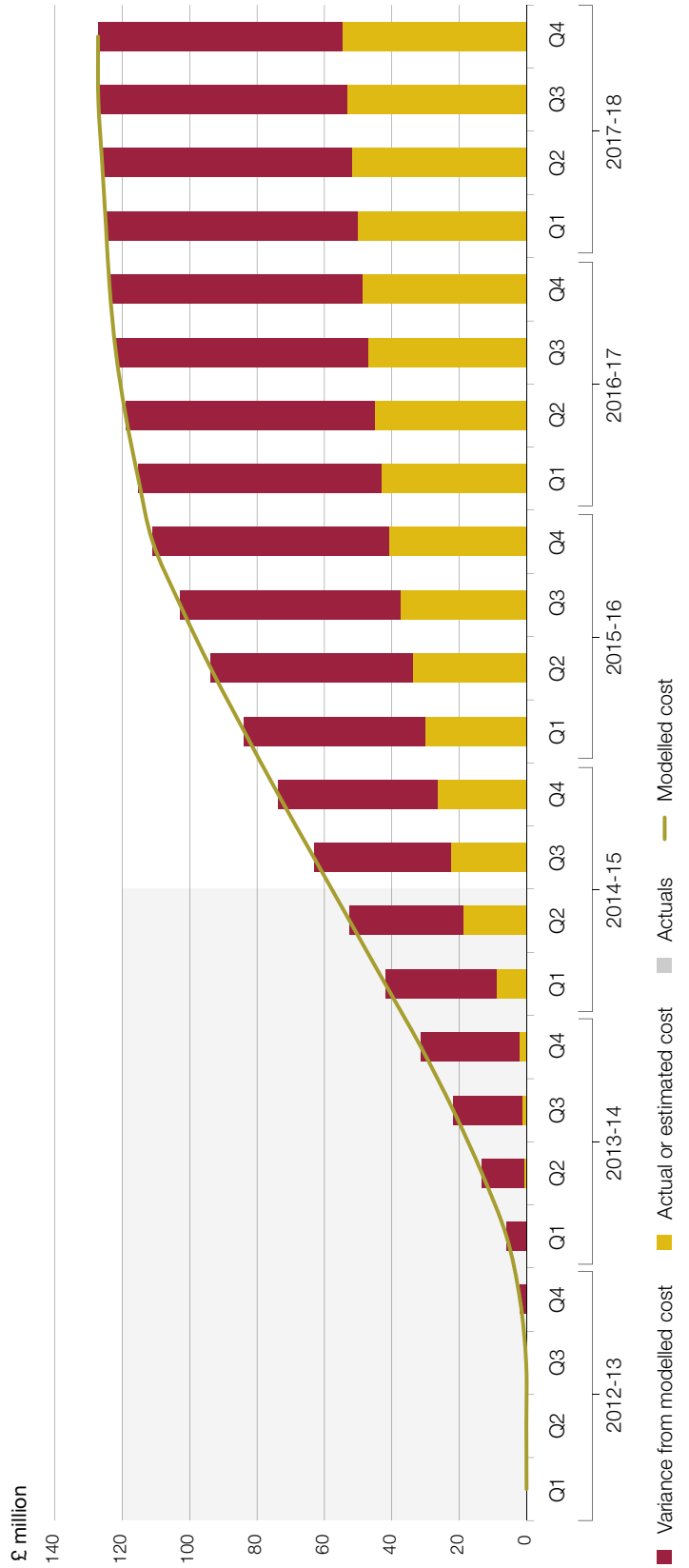
**Notes**

- 1 These data exclude 9 projects that are not using the 'milestone-to-cash' approach.
- 2 'Fibre to the cabinet' costs include work-in-progress, and so are not directly comparable with analysis of completed cost per cabinet at paragraph 3.8.
- 3 The difference between modelled and actual project management costs does not match the £33.7 million savings mentioned in paragraph 3.8 due to roundings.

Source: BDUK analysis

**3.10** BDUK's analysis shows that actual costs are lower than BT's bid prices but do not, in themselves, assure BDUK that BT priced the contracts economically. An independent assurance review in 2013, which compared supplier bids to a 'should cost' model, was hampered by limited cost transparency. In 2014, BDUK commissioned Atkins to undertake a second independent assurance review designed to cost a sample of phase 1 infrastructure so to benchmark BT's costs. This process will help BDUK to assess whether it is getting value for money from phase 1, and inform phase 2. The pilot phase of the review looked at a small sample of selected infrastructure within one local body, Suffolk. In January 2015 Atkins found that BT had charged Suffolk nearly 20% less than would hypothetically be charged by another efficient supplier, in part reflecting that BT benefits from substantial national bulk buying power compared with other providers. BDUK intends to extend this exercise to other locations in 2015.

**Figure 5**  
 Modelled versus actual or estimated project management costs, at September 2014  
 Project management costs are significantly less than those modelled in BT's bids



**Note**

1 These data exclude 9 projects that are not using the 'milestone-to-cash' approach.

Source: Broadband Delivery UK analysis

## Informing phase 2 bid costs

**3.11** BDUK is using its in-depth review of phase 1 costs to support local bodies on their assessment of BT's phase 2 bids. Local bodies may use 2 main sources to inform their costs. First, they can use their actual costs incurred in phase 1 as a benchmark. Second, they may use the revised reference financial model for phase 2, based on Suffolk's phase 2 bid.<sup>10</sup> BDUK used its actual cost information to review BT's early bid for Suffolk's phase 2 project and negotiate some changes. For example, it argued for a take-up trajectory that more closely matched that experienced in phase 1. It also argued for lower bid costs for some specific items, such as connection costs. A revised and lower phase 2 bid for Suffolk has become the basis for a new reference financial model, taking into account BT's cost synergies and the early experience of a fast pace of take-up. This model will more closely reflect actual costs during phase 1.

**3.12** After accepting the new phase 2 financial model based on Suffolk, BDUK compared the 2 reference financial models in Oxfordshire to gain further assurance on value for money. Oxfordshire is the first phase 2 contract to procure using change control to its existing contract. BDUK asked BT to give 2 bids, one using the phase 1 financial model and one using the phase 2 model, so it might identify the cost saving. BDUK found the second model would require 13% less public funding for the same contracted outcomes.

**3.13** Key terms and conditions for phase 2 contracts remain largely unchanged from phase 1. Non-disclosure agreements are still included in contracts which prevent local bodies from seeing each others' bid data or actual costs. BDUK believes, however, that its cost comparison reports contain enough information to help local bodies to assess whether their costs are reasonable. These cost comparison reports compare each local body's information to anonymised data from the other projects. Several local bodies have commented that they find the cost comparison reports useful. Similarly, the assumption that 20% of premises passed will choose to take-up superfast broadband has not changed for phase 2, even though early take-up has substantially exceeded expectations (see Part Five for more detail). Two projects have already exceeded the modelled 20% take-up rate, and 2 more projects are close behind. This assumption is a key component of the estimated profit, and therefore underpins BDUK's calculation of the public subsidy needed.

<sup>10</sup> The reference financial model sets out specific costs and assumptions, such as on expected revenue. It was agreed by BT when it was appointed to the procurement framework and must be applied consistently between different individual contracts.

## Part Four

### Promoting competition

**4.1** In phase 1 of the Superfast Broadband Programme (the Programme), Broadband Delivery UK (BDUK) decided to provide a framework which local bodies may choose to use when buying superfast broadband. There was some early competition to join the procurement framework, with both BT and Fujitsu originally appointed. However, BT was the only bidder in the framework procurements. Of the 44 projects, 11 procured their broadband contracts without using BDUK's framework. By July 2013, only 3 projects that procured without using the framework had more than a single bidder at final tender stage. Eventually BT was awarded all 44 contracts.

**4.2** The Committee of Public Accounts discussed the reasons for the limited competition in phase 1 at some length. In April 2014 it recommended that "before ... [future] ... funding is released, the Department should work with local authorities to identify opportunities to promote competition and value for money; including considering alternative solutions, joint working and fair capital contributions to suppliers".<sup>11</sup> We reviewed how BDUK had acted on this recommendation for phases 2 and 3 of the Programme.

#### **Promoting competition in phase 2**

**4.3** After the phase 1 procurement, BDUK faced major choices over its approach to phase 2 superfast broadband funding. Choices included, for example, whether to fund separate local projects (as in phase 1), or do central or regional procurement. In considering its approach to phase 2 and its approach to securing competition, BDUK had to balance complex demands and priorities. These included the level of delivery risk it was willing to bear, the affordability of different options, suppliers' capabilities and how to get best value for money and engagement from local bodies. It also needed to complete the procurements by June 2015, to use the current state aid approval from the European Commission.<sup>12</sup>

<sup>11</sup> See Appendix One for April 2014 Committee of Public Accounts recommendations.

<sup>12</sup> State aid is when public authorities choose to selectively help a supplier. The European Commission generally prohibits state aid, but allows government interventions in specific policy cases. It granted state aid approval to the superfast broadband scheme in November 2012, and this approval has since been renewed. The current approval expires in June 2015.

**4.4** BDUK did not prepare a separate business case on the rationale for how to design phase 2 of the Programme. The outline business case for phase 1 included assumptions that there would be extra funding (estimated then at £300 million) for the period to 2017. However, it contained no detail. In August 2013 BDUK prepared a paper for senior officials at the Department for Culture, Media & Sport (the Department), setting out high-level procurement options. These included extending the existing arrangements or doing a new procurement. To inform its approach, BDUK worked with the industry to understand the potential for competition. In October 2013 BDUK ran a supplier engagement session, where it sought views on several delivery model options. BDUK identified the benefits and disadvantages of the approaches, but did not fully develop and cost the different high-level options. In BDUK's view, doing so would have led to the same outcome but would have delayed the phase 2 rollout. In the end BDUK decided to procure phase 2 using the same delivery model as phase 1, whereby local bodies provide matched funding and run local procurements, using BDUK's procurement framework if they wish.

**4.5** Having decided on this delivery model, BDUK explored possibilities for competition within this approach. For example, BDUK officials spoke at industry events and worked with companies who might be viable competitors. Local authorities also did open market reviews and public consultations as required by state aid rules. As with phase 1, BDUK will support local bodies to procure outside the framework for phase 2 if they so choose. Around 20 local bodies originally assessed the feasibility of procuring locally outside the framework. However, previous experience in procuring phase 1 had shown that few competitors could work at the scale required. Using the framework has benefits to local bodies including speed of delivery and minimising costs of a second procurement. In the end, most local bodies decided to use new procurements under the existing framework, or issue a change control to the existing contract with BT. Only 4 local bodies do not intend to use the framework at all, and a further 10 local bodies have kept between 10% and 33% of their central government funding allocation back, which they may choose to spend outside of the framework.

**4.6** BT is now the only supplier on BDUK's procurement framework, as Fujitsu formally decided to withdraw from the framework in June 2014. As the majority of local bodies are using the framework to buy all or most of their phase 2 superfast broadband infrastructure, most of the phase 2 funding (£250 million from BDUK plus matched funding from local bodies) will go to BT. Phase 2 may generate some competition, but overall the first 2 phases will reinforce BT's already strong position in the wholesale local access market.<sup>13</sup> BT's assets and infrastructure are likely to have benefited from approximately £1.7 billion of public sector investment. BT must maintain these assets at its own expense. BT is also obliged to provide wholesale access to other suppliers, in line with regulatory conditions.

<sup>13</sup> The Wholesale Local Access Market concerns fixed telecommunications infrastructure – the physical connection between a consumer's premises and the local telephone exchange.

### **Promoting competition in phase 3 and elsewhere**

**4.7** As set out in Figure 2, Phase 3 of the Programme aims to explore options for how to get near-universal superfast broadband coverage across the UK. Reaching the final 5% of premises may require different technologies and approaches, as it would be difficult to extend BT's fibre-optic networks to the most remote locations. BDUK has set up a market test pilot programme to assess the feasibility and affordability of different commercial and technology options for reaching the final 5% without superfast broadband. It intends these pilots to support its approach to further funding to reach the final 5%. BDUK has allocated £10 million to fund the phase 3 pilot projects until March 2016. Total funding required to reach the final 5% has not yet been agreed. It is likely to be great as some of these premises are highly rural and geographically dispersed.

**4.8** BDUK worked with other suppliers to develop options to reach the final 5% of the UK. This included issuing a Prior Information Notice to engage the market, and holding supplier engagement sessions. BDUK officials spoke at industry events, promoting their interest in alternative suppliers. The phase 3 project created considerable competition, with BDUK receiving 26 bids for funding. It chose 8 of these projects to proceed to pilot stage after evaluating the bids. These pilot projects are in different geographic areas and use different approaches and funding arrangements. These include satellite, fixed wireless access and several hybrid technologies. The pilots have completed their feasibility reports, and 6 of the 8 pilots are moving to the deployment phase. BDUK is still assessing the feasibility of the other 2 proposals. BT chose not to apply for funding in this phase to test its more innovative new products.

**4.9** Most broadband suppliers are relatively small businesses, so the small-scale nature of the pilot projects helped suppliers to meet the scheme's requirements. If significant funding were to be agreed supplier capacity would be limited. For example, in 1 pilot project BDUK funding is 1.6 times the company's 2012-13 turnover. BDUK assessed only 2 of the 8 phase 3 pilot suppliers to be able to work at national level. BDUK has been considering how to adapt its approach when working with smaller companies, for example to avoid creating cash flow difficulties.

**4.10** Besides funding phase 3 of the Programme, BDUK is engaging with several other suppliers and initiatives to maximise the use of existing networks and facilities, and to promote competition. Besides contracting with 8 suppliers over the pilot projects, BDUK is engaging with other suppliers who can assist with modelling different solutions to reach the final 5%. For example, it has worked with suppliers such as KCom, Gigaclear and UKBroadband to share information, discuss their modelling assumptions and understand future investment plans. Such work may help more alternative suppliers to develop their proposals and maximise their competitiveness. It is also helping others to consider how they might maximise use of existing publicly owned networks such as Network Rail.

**4.11** The Programme fits within a wider context of public sector network infrastructure projects. BDUK plays a key role on a cross-government digital taskforce on this topic. The taskforce's remit is to look at policy on skills, technology investment and network infrastructure. As part of its work, the taskforce is looking at how to combine some of the many public sector network infrastructure projects to save costs and improve national network coverage. Such public sector projects could include the Public Sector Network, the Emergency Services Network, Network Rail's fibre network and education networks, as well as broadband.

## Part Five

### Phase 1 progress and phase 2 early progress

**5.1** Our July 2013 report *The Rural Broadband Programme* found the government was unlikely to meet its original target of completing the programme by May 2015. The tight timetable and delays in EU state aid approval had led to delays in local broadband projects. In June 2013, the Department for Culture, Media & Sport (the Department) issued a new target to secure delivery of phase 1 of the Superfast Broadband Programme (the Programme) (90% of premises with superfast coverage) by December 2016.

**5.2** Our July 2013 report examined Broadband Delivery UK's (BDUK's) modelling of key data on phase 1 of the Programme, such as expected percentage and number of premises reached by superfast broadband. However, we cannot directly compare the July 2013 and current data for the following reasons:

- The July 2013 data were based on those contracts then signed, plus estimates for the remaining local projects.
- In July 2013, data were only available on total premises passed. This included those that would still not achieve superfast speeds, or were already connected to other suppliers. BDUK is now able to report more accurate data for the number of premises reached.

Instead, we looked at early information about the number and timing of premises reached compared with the Department's revised phase 1 target.

**5.3** Ministers set the programme a revised target of ensuring superfast coverage reached 90% of premises by December 2016. BDUK predicts that commercial providers will reach 21.9 million premises, giving 76% superfast coverage without BDUK funding. It predicts that phase 1 of the Programme will reach 4.2 million premises, giving a further 14.7% premises with superfast coverage. Overall, 90.7% of UK premises will be able to receive superfast broadband when the Programme is complete. Of 44 projects, 26 local bodies have contracted to reach or go beyond the 90% superfast coverage target in phase 1. Some go substantially beyond 90%, for example Cambridgeshire estimates 95% superfast coverage. Contracts for 18 local bodies are not scheduled to reach 90% superfast coverage in phase 1.



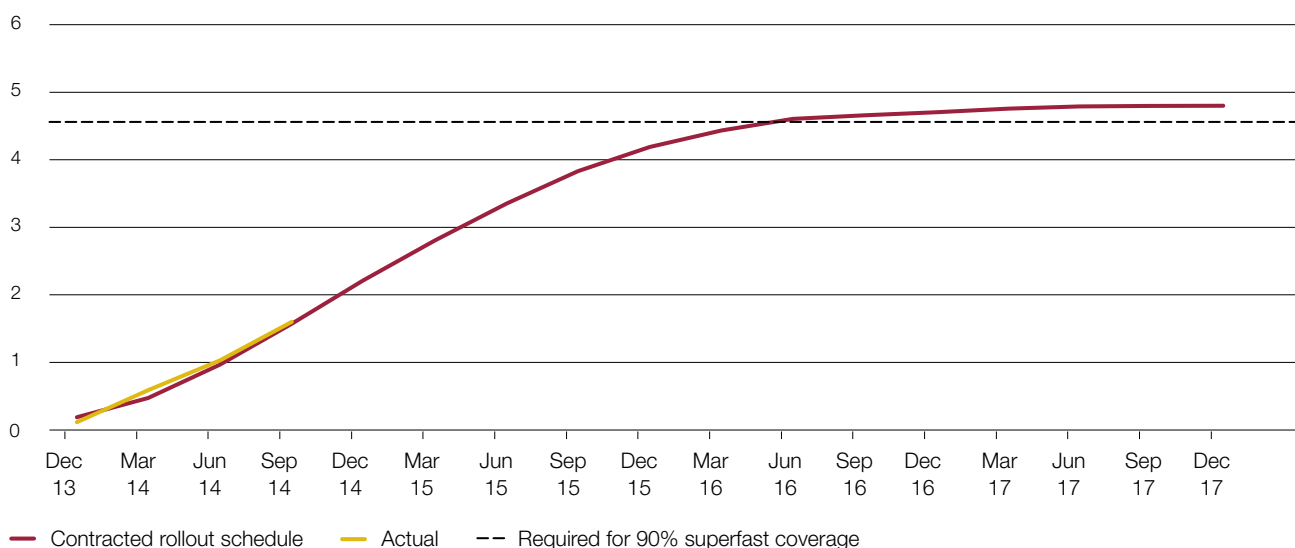
**5.4** Superfast broadband coverage is likely to reach its phase 1 target of 90% of premises ahead of schedule. BDUK's analysis of the 44 contracts between local bodies and BT indicates that superfast broadband coverage is likely to reach 90% of premises in Programme areas by April–June 2016 (**Figure 6**). At September 2014, BDUK's monitoring indicates that the programme is slightly ahead of schedule for total premises reached. Its analysis showed that, at September 2014, BT had passed 1.60 million premises, compared with 1.57 million set in the quarterly implementation plan targets.<sup>14</sup> BT's rollout is now averaging 40,000 premises a week. BDUK analysis (to September 2014) showed 33 of the 44 local bodies met or exceeded their targeted number of premises as at that date. Where there were delays these were often due to external factors. For example, in Devon and Somerset flooding had delayed deployment. Local bodies have contracted to complete 43 of the 44 projects by the target delivery date of December 2016. Only one phase 1 project, 'Rest of Scotland', is not scheduled to be complete until December 2017, although it is contracted to reach 90% before the end of 2016.<sup>15</sup>

**Figure 6**

Phase 1 actual and planned rollout, at September 2014

Rollout is slightly ahead of schedule at September 2014, and is expected to reach the targeted 90% of premises in April–June 2016

Premises passed (million)



**Notes**

- 1 Based on BDUK's implementation plan data. The implementation plan lists all 4.8 million premises which are scheduled to be passed by the supplier, not just the 4.2 million that will be able to receive superfast coverage for the first time. We use the implementation plan to map progress against target because more accurate data on premises passed is not provided on a quarterly basis.
- 2 Assuming the commercial deployment occurs as planned, Phase 1 of the Programme will need to reach 4 million premises to achieve the target of 90% coverage in Programme areas. This equates to 4.56 million premises in the implementation plan, as shown in this figure.

Source: BDUK analysis

<sup>14</sup> Figure 6 sets out why we have used implementation plan data as a proxy for the number for superfast premises reached, and the differences between the numbers.

<sup>15</sup> Scotland is split into 2 projects: Highlands and Islands, and Rest of Scotland.

**5.5** Rollout so far suggests that two of the main project assumptions may have been cautious. This is likely to bring cost savings for the Programme, with money reinvested using the clawback mechanisms to support further rollout.<sup>16</sup> First, as set out in Part Three, at September 2014 BT had spent 38% less in capital costs than its financial model had assumed it would and it had covered slightly more premises than predicted. Lower costs will allow projects to reach more premises. Second, the rate of take-up of superfast broadband is currently nearly 5 times higher than modelled in the contract assumptions (**Figure 7**). BDUK predicts that projects will reach the 20% modelled take-up rate after 12 quarters, rather than 20, based on a straight-line extrapolation of results to September 2014. Take-up which is faster than modelled will increase supplier profits, and create clawback for the public sector. If take-up were to continue past the 20% assumed in the contract, as it has already for 2 local bodies, this would also create clawback. For the first 7 years after rollout the public sector shares the benefit of the additional wholesale profit. After these 7 years, the supplier keeps all the extra wholesale profit from higher than expected take-up. So far, BDUK calculates that it has notionally secured £990,000 through its clawback provisions. BDUK and BT believe it is too early to predict whether average take-up will exceed 20% in the longer term, but there are local and national marketing campaigns under way to encourage increased take-up.

### **Early progress in phase 2 procurement**

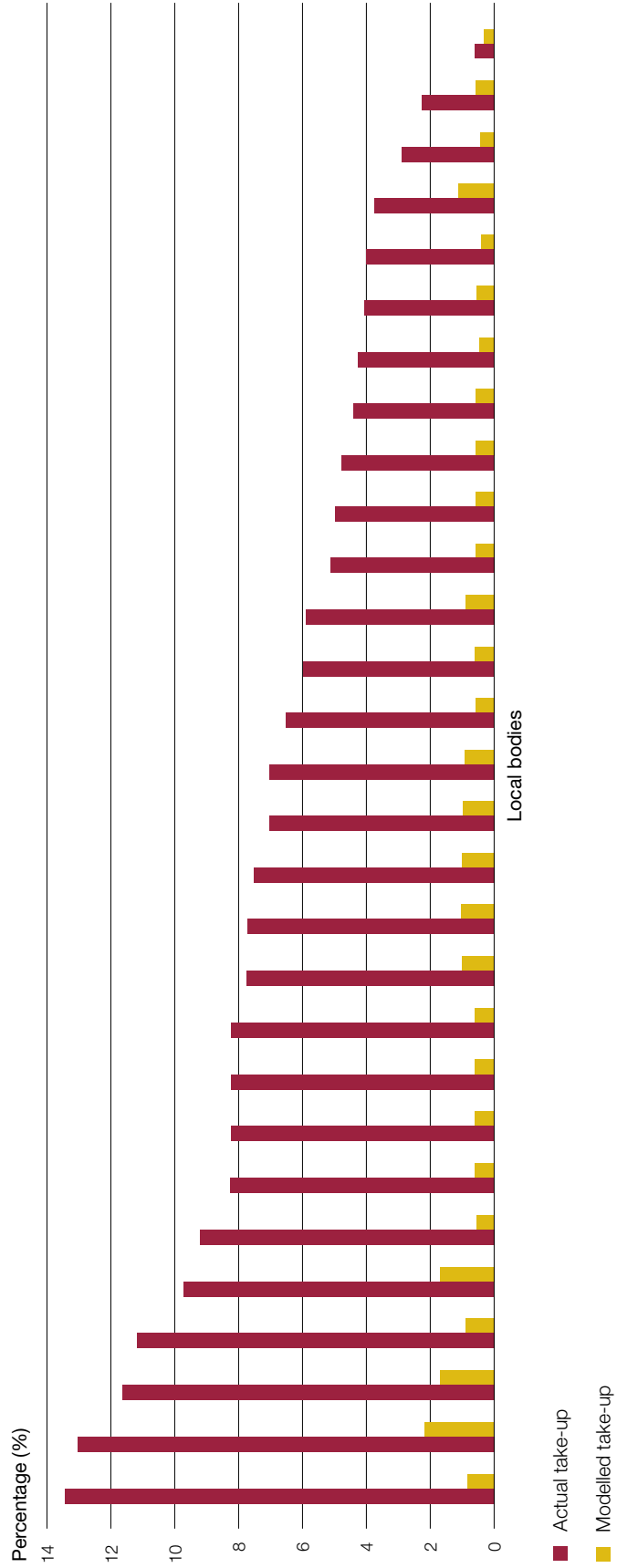
**5.6** Phase 2 of the Programme is in procurement. BDUK plans to complete its 47 procurements by June 2015 when the current state aid approval expires. All 47 phase 2 projects have started procurement. BDUK has agreed individual timing plans with local bodies who are now negotiating with suppliers. Rollout timings will be finalised with suppliers after the contracts are signed.

**5.7** By early January 2015 10 contracts were signed. The procurement process took some time to get under way. This was due to a number of factors including local bodies securing matched funding, supplier responses to open market reviews and consultation, and as a result of negotiation with suppliers over contract terms. BDUK told us that BT constraints in processing invitations to tender has also been a factor, but BT disputes this claim. BT is now processing 2 invitations to tender each week to ensure that projects are ready for phase 2 rollout to begin as soon as phase 1 deployment is complete.

<sup>16</sup> If profits are higher than expected, the supplier must return a portion of the money to the Department or reinvest it for further broadband deployment. There are two clawback mechanisms: one covering lower than expected capital expenditure, and the other higher than expected take-up.

**Figure 7**  
Actual versus modelled take-up of superfast broadband by local body (September 2014)

Take-up of superfast broadband in phase 1 is significantly higher than modelled so far



**Note**

1 This chart does not show take-up for those projects which are not using BDUK's 'milestone-to-cash' process. Both Rutland and North Yorkshire have take-up rates exceeding 20% but are not included in this graph.

Source: BDUK analysis

# Appendix One

## Our previous recommendations, and those of the Committee of Public Accounts

### **Committee of Public Accounts: April 2014 recommendations**

- a** The Department for Culture, Media & Sport (the Department) should work urgently with all local authorities to publish detailed mapping of their implementation plans, enabling searches down to full (7-digit) postcode level. The information should include speed of service, as soon as that is available.
- b** The Department should collect, analyse and publish costs data on deployment costs in the current programme, to inform its consideration of bids from suppliers under the next round of funding.
- c** Before the next round of funding is released, the Department should work with local authorities to identify opportunities to promote competition and value for money; including considering alternative solutions, joint working and fair capital contributions from suppliers.

### **Committee of Public Accounts: September 2013 recommendations**

- a** The Department should not spend any of the further £250 million of public money until it has developed approaches to secure proper competition and value for money for improving superfast broadband after 2015.
- b** Before contracts are awarded for additional broadband coverage from 2015, using the additional £250 million, the Department should improve its modelling work and, when negotiating levels of private sector investment, the Department should push for contributions that take account of the long-term value of the assets to the supplier.
- c** The Department should insist on a higher standard of cost transparency before contracting. Where contracts are not yet signed for the current Programme, the Department should secure BT's agreement to improve cost transparency, for example by omitting the non-disclosure agreement between local authorities.

- d The Department should set out how it has assured itself that local authorities will be adequately resourced and supported to carry out adequate checks on BT's costs and take-up rates during the project.
- e The Department should, as a matter of urgency, publish BT's detailed rollout plans so that other suppliers can get on with trying to reach the remaining 10% of the population that will still be without superfast broadband.

### **National Audit Office: July 2013 recommendations**

- a The Department should review all the reasons for the delay in rollout to date, and guard against further slippage. The Department's current projections suggest that the Programme will complete 22 months later than it originally planned. The Department should identify all the reasons for the slippage and then work with BT to establish where constraints exist and how to guard against further slippage.
- b The Department should seek greater assurance that BT's bid prices are reasonable and do not contain excessive contingency. Analysis to date has not been able to give a clear picture of the extent to which the prices at bid stage include contingency. The Department should seek:
  - an explanation from BT on the differences between the actual costs of a previous programme and costs included in tender bids;
  - further information in bid responses on cost drivers, unit costs and reasons for cost variations to enable 'should cost' models to be applied;
  - assurance from BT about how economies of scale are being passed to the public sector; and
  - more detailed analysis on key risk items such as project management.
- c The Department should implement the procedures it is developing to thoroughly monitor in-life contract costs, placing additional emphasis on ensuring staff expertise. In particular, the Department and local bodies should:
  - evaluate the implementation of payment processes to inform later projects;
  - carefully monitor operational costs and, if BT makes significant efficiencies over the bid costs, examine the scope for sharing in these;
  - consider the long-term need for sufficient financially skilled staff to support invoice checking and clawback arrangements; and
  - take steps to assure itself that local authorities are appropriately staffed to carry out robust checks.

- d** The Department should consider evidence on take-up rates outside of the Programme and discuss with BT whether its modelling assumptions are still valid. Take-up rates are a key assumption in determining investment levels and profits and can generate clawback for local bodies. If BT's assumptions appear conservative, the Department should support local bodies to use the clawback mechanisms as early as possible, and to consider whether there are ways of extending them.

#### For future projects

- e** The Programme contains lessons which could be applied to the Department's other programmes and to wider government. The Department sought to deliver a complex programme in a challenging time frame and designed a range of value-for-money safeguards aimed to work together to provide assurance. But there are some lessons which could be learned:

  - Programme design and safeguards should be directly linked by the number and quality of market players as indicated by robust market analysis.
  - If competition is weak, the Department should require a sufficiently high standard of financial transparency to be able to assure the reasonableness of unit costs.
  - External benchmarking of prices to industry standards or a 'should-cost' model should be done early in the process to inform the assessment of all supplier costs.

© National Audit Office 2015

The material featured in this document is subject to National Audit Office (NAO) copyright. The material may be copied or reproduced for non-commercial purposes only, namely reproduction for research, private study or for limited internal circulation within an organisation for the purpose of review.

Copying for non-commercial purposes is subject to the material being accompanied by a sufficient acknowledgement, reproduced accurately, and not being used in a misleading context. To reproduce NAO copyright material for any other use, you must contact [copyright@nao.gsi.gov.uk](mailto:copyright@nao.gsi.gov.uk). Please tell us who you are, the organisation you represent (if any) and how and why you wish to use our material. Please include your full contact details: name, address, telephone number and email.

Please note that the material featured in this document may not be reproduced for commercial gain without the NAO's express and direct permission and that the NAO reserves its right to pursue copyright infringement proceedings against individuals or companies who reproduce material for commercial gain without our permission.



National Audit Office