Establishing world-class connectivity throughout the UK: Responses to the Committee’s Second Report of Session 2016–17

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The Culture, Media and Sport Committee

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Committee staff

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Second Special Report

The Culture, Media and Sport Committee published its Second Report of Session 2016–17, on Establishing world-class Connectivity throughout the UK, (HC 147) on 19 July 2016. The Government’s response was received on 21 September 2016 and Ofcom’s response was received on 29 September 2016, and are appended to this report.

Appendix 1: Government response

Introduction

The Government welcomes the Select Committee’s report “Establishing world-class Connectivity throughout the UK” examining how the full benefits of digital connectivity can be extended to all in the UK. The Government is committed to this objective and we are pleased that the report recognises the good progress the UK has made so far, particularly compared to other EU countries in extending broadband coverage, take up and maintaining lower consumer prices. Better connectivity is vital for economic growth and enabling individuals to participate in the economy and society.

The partnership between central Government and local authorities has resulted in £1.7bn of public investment in superfast broadband across the UK and has enabled commercial suppliers to extend coverage of superfast broadband to over 90% of UK homes and businesses. Your report notes that the BDUK Superfast Broadband Programme focused on delivering to the easier to reach premises first, leaving some communities unconnected and uncertain about the timing of digital connection. The BDUK programme approach has been to maximise coverage for the available public funding, and this will see coverage rise to 95% of UK homes and businesses by the end of 2017.

There are a range of commercial, technological, geographic and demographic challenges to overcome to connect the hardest to reach premises and in this context BDUK’s original approach has, in the Government’s view, provided better value for money. Recognising the need to address these challenges, however, the Government and BDUK supported a series of pilot projects looking at alternative technologies and commercial models that could increase the options for connecting those hard to reach. As a result of the pilots a number of smaller suppliers are actively supplying services to some of these communities and will help, along with the broadband Universal Service Obligation (USO), to ensure that no communities are left behind.

The Government welcomes the Committee’s comments and suggestions about how the broadband USO should work, and we will carefully consider the points made. The report’s support for the Government’s decision to set the minimum download speed at 10Mbps initially is welcomed. We expect that the USO minimum speed requirement will need to evolve as demand changes.

We welcome Ofcom’s determination to address the regulatory issues highlighted in the report. Ofcom is introducing regulations to allow Communications Providers (CPs) to access BT’s network as ‘dark fibre’ allowing CPs to use their own equipment to send signals along BT’s fibres, giving more scope for innovation. Ofcom’s Digital Communications
Review (DCR), included a proposal on access by CPs to BT’s ducts and poles (DPA). Ofcom is working closely with BT and CPs to make access easier to the duct and pole database and the data more accurate.

Ofcom has long mandated Alternative Dispute Resolution (ADR) procedures for use in disputes between consumers and their CPs. It is for the CP to pursue with Openreach any problem with Openreach’s network, on behalf of the affected consumer. If this does not result in a satisfactory conclusion for the consumer, then the ADR process is open to them.

Ofcom considered the issue of BT’s investment in Openreach in the Discussion Document for the DCR. An independent report suggested that, over the nine years to March 2014, BT made aggregate returns of about £4bn more than Ofcom’s benchmark cost of capital, but Ofcom found that around two thirds of the gap was accounted for by policy choices made by Ofcom when setting charges and the rest was due to BT’s performance against the controls.

The government supports Ofcom in addressing any lack of transparency in financial planning and investment by Openreach. Ofcom’s proposals include independent governance structures and processes from BT Group; autonomy over its budget and over its strategic and operational decision making; and greater transparency over how costs and assets are allocated between Openreach and the rest of BT.

Responses to each of the Committee’s recommendations to the Government are provided below.

**Connectivity for small businesses**

**Recommendation 1**

*It is essential that the Government and Ofcom ensure that SMEs have access to reliable and affordable broadband and are not discriminated against by providers. The Government must prioritise delivering superfast broadband to new and existing business parks and fully connect enterprise zones, many of which still do not have superfast connections.*

We agree with the importance of connecting business parks and enterprise zones. Many BDUK projects prioritise these. Further, the broadband connection voucher scheme has not only connected a significant number of businesses it has also acted as a catalyst for change in the business market, which has seen an increase in diversity of suppliers and technologies available following the programme.

**Recommendation 2**

*The broadband connection voucher appears to have been very successful in pooling demand and facilitating better connectivity for SMEs. We share the Minister’s enthusiasm for an extension of the scheme and see a strong case for further vouchers to support those businesses in areas not likely to be reached by superfast broadband or affordable commercial products, such as the many small businesses in remote rural areas in the “final 5%”. We (also) recommend that the Government evaluate the case for a rural voucher scheme to pool demand and contribute to the cost of backhaul access for network builders.*
There are no plans to extend or launch a new broadband connection voucher scheme at this time. The existing scheme was primarily based on the premise of connecting businesses to existing infrastructure capable of delivering superfast and ultrafast broadband.

**Recommendation 3**

*It will be important that DCMS and Ofcom fully involve the devolved administrations in future policy making and the design of future interventions for broadband and mobile given that a one sized approach is unlikely to work for all.*

DCMS works closely with the Devolved Administrations where policy development affects their areas. The Devolved Administrations are responsible for the management and delivery of the BDUK-funded projects in Scotland, Wales and Northern Ireland. BDUK provides a significant level of expert support to help the Devolved Administrations in this process. DCMS has worked very closely with the Devolved Administrations in ensuring the amendment of the UK-wide Code Regulations, to take account of mobile planning reforms in England, do not impact adversely on them. DCMS has committed to work with them to ensure that the Regulations are further updated when the Devolved Administrations deliver their own mobile planning reforms.

**Mobile Connectivity**

**Recommendation 4**

*To facilitate investment by the (mobile) operators, the Government may well need to place additional emphasis on achieving coverage (through the 700 MHz auction), and on the role that mobile will play in meeting the universal service obligation for broadband, rather than primarily maximising revenue from the auction.*

The Government is supporting industry investment by reforming the mobile planning laws and the Electronic Communications Code. These reforms will make it easier and cheaper for industry to roll out digital infrastructure across the UK. With regards to spectrum, the role of spectrum auctions is not primarily to raise revenue but to allocate scarce spectrum where demand is likely to exceed supply, as has generally been the case for mobile networks. The issue of how 700 MHz spectrum will be allocated and the terms of 700 MHz licences are for Ofcom in the first instance; Ofcom has already indicated in its Strategic Review of Digital Communications (initial conclusions, February 2016, pp. 4, 26) an intention to look at coverage obligations in 700 MHz licences. We also recognise the role that the USO can play in supporting mobile coverage. The USO will support delivery of broadband and mobile coverage as some mobile operators also offer seamless WiFi calling as well as femtocells that use a broadband connection to provide mobile coverage. The USO itself will need to be technology neutral, and it is possible that a range of technologies will have a role to play in delivering it.
**Recommendation 5**

*Given the progress being made and the undertakings agreed by the mobile network operators in 2014, the Government should, as it has acknowledged, continue cutting red tape, reform the Electronic Communications Code and take further steps to provide a conducive environment to investment and easy access to fairly priced backhaul connectivity.*

Reform of the Electronic Communications Code will take place under the recently introduced Digital Economy Bill. The Government will continue to identify different ways to incentivise commercial investment for both mobile and fixed broadband connectivity. The Digital Economy Bill for example also includes powers to make the temporary relaxations in the rules for deploying overhead lines, poles and broadband cabinets introduced in 2013 permanent. In addition, the EU Broadband Cost Reduction Directive was implemented on 31 July and is designed to reduce the cost of broadband deployment by enabling the sharing of passive infrastructure across utility, transport and communications sectors.

**Recommendation 6**

*London’s principal transport routes such as the London Underground should have mobile and internet connectivity. Partnerships with private infrastructure groups may be able to facilitate a solution. A quid pro quo for an investor might be special access to the Underground’s passive infrastructure. There is also a vital need to improve mobile reception along principal rail routes.*

The Government recognises that dropped calls and intermittent access to the internet are frustrations felt by many rail passengers. We are working with the rail and telecommunications industries to reach a collective understanding of the technical and commercial challenges and the potential solution to this problem. Alongside this we are also working to improve connectivity on trains through mandating free on-train Wi-Fi in all new franchises and by 2018 all train operators will be contracted to deliver free on-train Wi-Fi with the majority of trains being fitted before the end of 2018.

We are aware of comparisons with other leading global cities where underground trains systems have been networked to allow mobile and internet connectivity. Currently internet connectivity is available through WiFi in 250 stations on the London Underground. This is available to customers of Virgin Media (broadband and mobile customers), EE, Vodafone, O2 and Three. Other users are able to purchase a WiFi Pass to get online. We understand that TfL are investigating the feasibility of adding mobile connectivity to the London Underground.
Reaching the Final Per Cent

Recommendation 7

We consider that there is an important, but limited, role for satellite provision in meeting the overall challenge of delivering affordable broadband services. Satellite providers are particularly relevant for extreme rural provision, which might incur supplementary costs beyond a potential standard USO tariff structure. They are also relevant for expedient provision to bridge a gap until terrestrial services gradually extend through to most of the premises as yet beyond the BDUK rollout.

The Government agrees with the Committee that satellite services can play a valuable role in providing the widest possible geographical coverage for broadband. Satellite is already being used to provide broadband services to remote parts of the UK, and is one of the technologies being used in the Better Broadband Subsidy Scheme which improves broadband connectivity for premises with slow broadband speeds of less than 2Mbps. The BDUK Market Test Pilots have also shown that a range of technologies, including satellite, are capable of delivering superfast speeds in rural areas. The broadband USO will be delivered using the most appropriate technologies, and we are looking into all options.

Recommendation 8

Clearly, in supporting community action in the final five per cent, Government and local authorities will need to consider how best to advertise available solutions to those with poor connectivity. The challenge of reaching the final five per cent is likely to demand the active and willing co-operation of local communities wherever possible. BDUK should offer guidance and support in relation to key areas such as: choosing the right technology solutions, raising finance, stimulating demand and minimising other costs of provision.

BDUK continues to work with local authorities to increase the coverage of superfast broadband, which could reach 97%, by reinvesting funds returned by suppliers under BDUK contract requirements. As part of this, BT has made available £129m of early gainshare funding to support investment in further superfast coverage across the UK. Underspends from efficiency savings are expected to release at least a further £150m for further investment.

BDUK is also making available information on establishing community broadband solutions, including advice on delivery models, technologies and financing options, illustrated by case studies of different community schemes across the UK. The Better Broadband Subsidy Scheme is available to provide access to basic broadband solutions for those people who cannot otherwise get a minimum of 2Mbps broadband.

BDUK Claw-back

Recommendation 9

Local bodies must be entirely free to choose how to reinvest (BDUK claw-back funds) and to spend it with alternative providers other than BT Openreach, if they consider that as being a more appropriate and cost-effective option.
The Phase 1 and Phase 2 contracts agreed between local authorities and suppliers require the parties to work together to seek further opportunities to reinvest any clawback funding. If further opportunities which can deliver value for money are not available, then the supplier may choose to repay the clawback funding to the local authority, who can then decide how to procure any further coverage. Alternatively, local authorities may decide to borrow against clawback funding to support further investment.

**Broadband USO**

**Recommendation 10**

Rather than introducing two USOs, a single USO should be sufficient to accommodate the typical needs of both residential and small businesses that require above average speed connections, it is reasonable that they pay extra for these services.

The intention is that the broadband USO will act as a digital safety-net for both households and businesses. Once in place, our ambition is that it will provide a legal right to request an affordable broadband connection of at least 10Mbps. A connection speed of 10Mbps will cater for the needs of many small businesses in areas where commercial broadband services offering speeds of 10Mbps and more are not available. Under the existing telephony USO, consumers can be asked to pay if the costs of connecting them exceed an agreed cost threshold—we will need to consider whether a similar approach would be appropriate for the broadband USO.

**Recommendation 11**

The design of a new USO should be in line with the Government’s and Ofcom’s aspiration for competition in broadband delivery, both at the service and infrastructure level. Ideally, the USO must be designed so as not to impose too great a burden on industry: to incentive investment, without creating consumer detriment or overly inhibiting take-up.

The Committee’s report rightly recognises that there a number of complex and interrelated factors that need to be taken into account in designing the USO. We have asked Ofcom to advise on a number aspects of the design of the USO, and to report on its findings by the end of the year. Its analysis will help inform decisions about the elements of the USO that will need to be specified in secondary legislation, which we expect to consult on in spring 2017. In the short term, before the Committee Stage of the Digital Economy Bill, we intend to publish a statement of intent on the principles which will guide the design of the USO.

**Recommendation 12**

The Government should be making active plans for an increase in USO minimum which may be need to be a minimum of 30 Mbps by 2022.

Subject to the analysis that Ofcom is undertaking, we recognise that the 10Mbps minimum may need to change in the future. That is why the Digital Economy Bill includes a measure that will enable government to direct Ofcom to carry out reviews of the USO.
**Recommendation 13**

The Government and Ofcom should ensure the design of USO uses and extends existing networks rather than displace them and establish a framework that promotes diversity involving a range of providers.

We are mindful of the need to ensure that the USO complements and does not displace commercial or publicly funded broadband deployment, and note the Committee’s views on the need for a framework that encourages a range of providers. This was an issue that Ofcom raised in their Call for Inputs (CFI) on design of the USO earlier this year. The majority of respondents to the CFI shared Ofcom’s preference for a transparent and competitive universal service provider(s) (USP) designation process, with many advocating the designation of USPs at a regional or sub-regional level.

**Recommendation 14**

The Government should consider introducing a USO as early as 2018 once the BDUK programme ends.

We have committed to having the broadband USO in place by 2020, at the latest. There is still a lot of detailed work to be undertaken, but we know this is a very important issue for consumers, and will introduce it as soon as possible, mindful of the need not to displace commercial and publicly-funded investment plans. BDUK’s Superfast Broadband Programme will continue to increase coverage, which could reach around 97%, as project savings and additional take-up revenue are reinvested to extend superfast broadband connectivity further.
Appendix 2: Ofcom’s response

1. Committee’s recommendations/observations on designing a universal service obligation for broadband.

In November 2015, the UK Government set out its intention to introduce a broadband universal service obligation (USO). Ofcom has been commissioned by the Department for Culture, Media and Sport to provide technical analysis and recommendations to support its policy decisions on the design of the broadband USO. We will provide our final advice to Government by the end of 2016.

- **Under a USO, it will be important that Ofcom identifies logical, coherent areas for provision, assuming that it is not done on a national basis as it is for current fixed-line USO.**

We agree that coherent regions for provision would need to be identified if a national approach is not taken. We are undertaking a detailed technical analysis of where potentially USO-eligible premises are located. It may be the case that premises are geographically dispersed across the UK and therefore we are considering whether regional models may be an appropriate mechanism for implementation, or whether a national model may be a more efficient solution. We will be providing the UK Government with a final report on our analysis by the end of the year.

- **Ofcom, or a body appointed by Ofcom, would need to oversee tendering and offer an effective ADR process where disagreements arose between Openreach, other providers, individual consumers, or local representative bodies. Ofcom would also need to designate a national or regional single point of responsibility to coordinate, manage and arbitrate between different networks over issues such as network connectivity, and rectification of faults and repairs.**

Whether there will be a need for such arrangements and the extent of those are under consideration and the recommendations of the Committee are noted. However, the specific details related to the implementation of the USO are not explicitly included in the analysis commissioned by government, and therefore we would expect them to be considered in further detail as the policy design is developed by government.

- **(Regarding a levy to fund the USO) DCMS and Ofcom would need to estimate the amount that a levy would need to raise and then set the individual charge in line with the total number of subscribers. The levy could then be adjusted over time in line with the actual costs of provision.**

Government has asked Ofcom to consider an industry-funded cost-sharing scheme in our report and we will consider the Committee’s views as part of this. In practice, it is likely that there would need to be an upfront estimate of cost and then a cost recovery mechanism, including the level of contribution required from the relevant parties, based on actual costs incurred.

- **The Secretary of State has asked Ofcom to consider the case for setting a social tariff. Ofcom will need to determine the parameters for such a tariff, for example data allowances which might apply.**
Ofcom notes the Committee's recommendation regarding the parameters for such a tariff.

2. *Committee’s recommendations/observations on mobile coverage*

- **Ofcom will need to provide accurate information on mobile coverage so that the consumers can make informed decisions, and also hold the mobile network operators to account on their investment and coverage commitments.**

We agree that accurate information on mobile coverage is needed to ensure that consumers are able to make informed choices. We are undertaking a range of work to improve information on mobile coverage and hold the operators to account, some of the details of which are below.

In 2015 Ofcom launched interactive mobile coverage maps, enabling consumers and businesses to compare the coverage provided by different mobile operators in the locations that are most important to them. In addition to allowing consumers to make more informed choices of mobile operator, the maps are designed to encourage mobile operators to compete in providing better coverage. The maps are available here: [http://maps.ofcom.org.uk/check-coverage](http://maps.ofcom.org.uk/check-coverage). Measures contained in the Digital Economy Bill, which was introduced to the House of Commons on 5 July, will strengthen Ofcom's ability to collect and publish information relating to mobile coverage and performance.

Ofcom also undertakes regular research into the performance of mobile networks. The Smartphone Cities report provides a comparative overview of mobile voice and data performance in 5 UK cities. The report is available here: [http://bit.ly/2biHj7r](http://bit.ly/2biHj7r). Over the coming months Ofcom plans to build a nationally representative panel of smartphone users to allow us to report on network performance and consumer satisfaction across the UK.

Ofcom has taken a number of steps to improve mobile coverage more generally across the UK. Under the terms we set for its 4G licence, O2 is required to provide indoor coverage to 98% of the population and at least 95% of the population of each of the UK nations by the end of 2017. The other mobile operators have indicated that they intend to match O2’s obligation on proportions of coverage. In December 2014, the UK Government also signed an agreement with the mobile network operators which guarantees voice and text coverage from each operator across 90% of the UK geographic area by the end of 2017. These commitments, which are now written into the licences of the mobile network operators, will provide increased coverage, though the precise areas covered will vary by operator.

If the mobile network operators do not meet their legally binding coverage obligations, Ofcom can revoke (or vary) the licence or prosecute. In limited circumstances, Ofcom may impose a financial penalty. The Digital Economy Bill will provide Ofcom with powers to issue financial penalties if matters such as coverage requirements are not satisfied.

We recognise that more needs to be done, both to improve coverage overall and also to improve consumer experience even where there is coverage. As part of this we will assess how we can impose new obligations on operators bidding for spectrum in the future to increase coverage, especially in rural areas. For example, the 700 MHz spectrum band is
well suited to providing better coverage. The 700 MHz band will be available for mobile use by the end of 2021, and potentially up to two years earlier. We expect to auction mobile licences for the band in late 2018 or 2019.

3. **Committee’s recommendations/observations on Openreach quality of service**

   - *If the regulator were to place more emphasis on Openreach’s quality of service, BT would voluntarily invest more in the infrastructure to avoid significant penalties.*

We agree that quality of service across the communications sector must improve and that includes Openreach. As part of the initial conclusions of the Strategic Review of Digital Communications published in February 2016, we highlighted the need for a step change in quality of service across the industry. We are setting tougher quality of service standards for Openreach; we will publish performance data for all operators; and ensure consumers and small businesses receive automatic compensation if things go wrong. In April, we introduced new service-quality standards for the bespoke broadband services used by larger businesses.

We have already imposed minimum standards for line installation and repair times on the copper network, at levels that rise over time. Openreach has met these minimum standards to date and tougher standards apply this year (2016/17): if Openreach fails to meet these standards, it faces substantial fines. We also intend to consult on more demanding minimum standards and other measures to improve Openreach quality of service around the turn of the year.

We will consider whether minimum standards could play a role in improving Openreach’s performance in areas not subject to them today. For example, we are examining whether to apply minimum standards to the underlying reliability of the copper network, or to the number of consumers waiting an extended period for a repair or line installation. However, we will also differentiate clearly between minimum standards—the level below which service must never fall—and the level of performance above the floor that we expect Openreach to achieve.

We will consult on all our planned minimum standards for the copper network, and how to incentivise Openreach to deliver quality above the minimum levels required, in our forthcoming Wholesale Local Access Review consultation.

In business (leased lines) markets, in April 2016 Ofcom introduced strict new rules to improve BT’s performance in installing and repairing high-speed optical fibre lines used by larger businesses. We have imposed conditions on Openreach to provide businesses with greater certainty that Openreach will deliver on the dates it promises, and to improve the underlying speed of delivery. For example, in the year ending March 2017 Openreach must complete 80% of leased line orders by the date it promises customers, rising to 90% by the year ending March 2019. Openreach must also fix at least 94% of faults on its leased line network within five hours in each of the next three years.
4. Committee’s recommendations/observations on BDUK

- **We were surprised that Ofcom has not yet provided any detailed analysis or verdict on how the BDUK programme has performed so far as part of its ten-yearly strategic Digital Communications Review. This was a significant omission on Ofcom’s part.**

Oversight of the BDUK programme is for Government. Ofcom does not have a statutory remit to investigate or monitor the progress of the programme. However, BDUK project areas are included in the overall assessment of superfast broadband availability, take-up and performance that Ofcom publishes, including in our annual Connected Nations report.

In addition, Ofcom has previously considered the impact of the BDUK rollout on connectivity more generally as part of wider work. For example, Ofcom stated that we are concerned that not all small and medium-sized enterprises (SMEs) will benefit under the UK Government’s current Superfast Broadband Programme. In June 2014, Ofcom found that only 56% of SME premises had access to superfast broadband, compared to 75% of all UK premises. Our analysis suggests that by 2017, when 95% of all premises are due to have access, around 18% of SMEs may still not be able to receive superfast broadband. Ofcom has therefore recommended to the UK Government that explicit targets for business coverage are set to help ensure SMEs have access to the right technology.

- **In its current negotiations with BT over the future of Openreach, Ofcom must insist on publication of this (full broadband speeds and coverage at a premises level) data for those BDUK intervention areas which have been covered using public money.**

As explained above the BDUK project areas are included in the overall assessment of superfast broadband availability, take-up and performance that Ofcom publishes. Our Connected Nations 2016 report will be published by the end of the year. This report will use household-level data provided by the major telecoms companies to report on what services are available where, and levels of take up. Ofcom is required to conduct this analysis as part of its statutory duties to report to the UK Government on the state of the UK’s communications infrastructure. Under Ofcom’s Open Data policy, we publish as much of the underlying data set as we can, subject to ensuring that this does not cause any data privacy or commercial confidentiality concerns and is within our statutory powers.

In March 2016, Ofcom launched a mobile and broadband coverage checker ([http://maps.ofcom.org.uk/check-coverage](http://maps.ofcom.org.uk/check-coverage)). It uses coverage, availability and broadband speeds data, collected directly by Ofcom from major communications providers. Simply by entering their postcode, users can check mobile coverage, the availability of superfast broadband and average downloads speeds—all in one place. Businesses looking to relocate or expand to new premises, as well as house-hunters, can use the tool to help assess the quality of communications services in different areas. Similarly, customers looking to upgrade their broadband package can check whether faster services are locally available and, if so, how superfast and standard broadband speeds compare on average. People and businesses can also investigate whether their existing broadband service is underperforming, by comparing their connection speed against the average for neighbouring properties. This could provide useful evidence when contacting a provider.
with a service problem. Provisions in the Digital Economy Bill, which was introduced to the House of Commons on 5 July, will allow us to update our interactive maps, which provide information on mobile and broadband coverage, more frequently.

- **It will be important that DCMS and Ofcom fully involve the devolved administrations in future policy making and the design of future interventions for broadband and mobile, given that a one-sized approach is unlikely to work for all.**

We agree with the Committee’s recommendation on Ofcom engagement, and as we already do, we will continue to engage with the devolved administrations on our work on connectivity, recognising the variation in consumer experience across the UK.

To enable this, we have offices in each of the nations to ensure direct engagement with national governments, elected representatives and local stakeholders. We also have Advisory Committees in each nation to advise Ofcom about the particular interests and opinions of consumers and citizens in Scotland, England, Northern Ireland and Wales on communications matters. Over the past year, the UK Parliament has taken steps, including through introducing legislation, to strengthen Ofcom’s relationship with the devolved administrations, by enabling the respective administrations to appoint a member of the Ofcom Board and outlining direct accountability requirements, including how we consult the nations on our strategic priorities and provide evidence to the parliaments and assemblies.

5. **Committee’s recommendations/observations on fibre and Duct and Pole Access**

- **Opportunities for the rollout of fibre to remote nodes should be fully investigated by Ofcom as part of an overall solution for rural connectivity. To assist with deployments, Ofcom should have an important role in overseeing the mapping of national availability of fibre together with a schedule of rates, including suitable spare capacity of public-owned assets.**

In terms of investigating the opportunities for the rollout of fibre to remote nodes, we will be undertaking work to understand the availability of broadband connectivity across the UK, including in rural areas as part of our analysis to support the Government’s development of a USO. In order to identify how many premises would be eligible for a USO, our team is mapping which postcodes have connections that cannot deliver today 10Mbit/s. We have commissioned work to assess which technologies (not only fibre) would provide the most efficient value for money connection for different types of premises in order to deliver a decent broadband consumer experience. One of the principles guiding the USO is technology neutrality: our work considers all technologies that can deliver the technical specification of the USO, and not only fibre.

In terms of mapping the availability of fibre, Ofcom does not have legal powers or statutory obligations to require communications providers to publish information about the locale of their fibre networks. That said, we are undertaking related work on Duct and Pole Access and dark fibre:

- **Ducts and Poles:** we have determined that telecoms providers need to know the physical location and characteristics of Openreach’s ducts and poles to assess how to plan their networks. As set out below, as part of the implementation of
the conclusions of the Digital Communications Review, Openreach has agreed that it needs to provide a comprehensive map of its ducts and poles so that other telecoms providers can understand this information more easily. It has recently demonstrated how this database tool would work, and we expect it to be available to other telecoms providers in 2017.

- **Dark Fibre**: in the relevant existing “leased lines” or “backhaul” market communications providers who choose to make a “dark fibre” service available will already provide information on where these facilities can be provided on the request of anyone planning to deploy new networks. This reflects the broader position that information on the availability of fibre should be available on request from other “network operators” (meaning communications providers other than BT and owners of other such “passive” infrastructure assets that can be exploited to reduce the costs of telecom network deployments such as the electricity distributions companies) through the Communications (Access to Infrastructure) Regulations 2016, as detailed further below.

In relation to the mapping of fibre more broadly, in February 2015, the UK Government published maps and data for the UK public sector telecommunications and digital infrastructure.

- **Ofcom should set out a programme of work to facilitate take-up of access to Openreach’s ducts and poles facilities by non-BT providers. Access arrangements will need to be supported by an Alternative Dispute Resolution process to resolve any problems, perhaps in line with the mechanisms used to support effective functioning of the Electronic Communications Code.**

We agree with the Committee, and are setting out plans to improve access and ensure that effective dispute resolution is in place. As highlighted in our initial conclusions of our Strategic Review of Digital Communications, improving access to Openreach’s network of ducts and poles is central to our strategy of increasing investment in new fibre networks. In our July publication *(Progress update: supporting investment in ultrafast broadband networks)* we set out an overview of our programme of work and how we are engaging with Openreach and industry on the practical aspects of ensuring better information and efficient operational processes to enable third parties to plan and assess the potential to use Openreach’s ducts and poles in the deployment of large-scale ultrafast networks. This included:

- **Better information.** Telecoms providers need to know the physical location and characteristics of Openreach’s ducts and poles to assess how to plan their networks. Under the current DPA remedy, Openreach responds to requests from other telecoms providers by emailing individual picture files of specific geographic areas from its mapping database. This is insufficient for large-scale use. When using DPA, our aim is for BT and other telecoms providers to be able to access information about the location and state of Openreach’s ducts and poles in the same way. Openreach has agreed that it needs to provide a comprehensive map of its ducts and poles so that other telecoms providers can read this information more easily. It has recently demonstrated how this database tool would work, and we expect it to be available to other telecoms providers in 2017. While we welcome this as a good first step, we recognise that
more needs to be done to ensure that the underlying information database has
more detailed and accurate information (e.g. in terms of spare duct capacity),
and is updated promptly and efficiently following field surveys. We plan to set
out proposals for DPA, including how the database tool should be implemented
in a consultation this autumn.

- **Efficient operational processes.** Openreach’s existing DPA product enables
other telecoms providers to survey ducts and poles and to build ultrafast
broadband networks where there is available capacity. However, there are a
number of limitations with the current approach. For example, if a rival telecoms
provider encounters a blockage while deploying fibre in an Openreach duct,
it must stop work and wait for Openreach’s contractors to clear that blockage
before it can resume work. This can result in delays and inefficiency. In contrast,
when Openreach itself deploys fibre in its ducts (potentially using the same
engineering contractors) it is able to deploy fibre and remove blockages at the
same time. Openreach has acknowledged the need to examine these processes.
It has begun trialling new, simplified duct and pole sharing processes with five
telecoms providers which allow these other providers to carry out more work on
their own, more quickly and efficiently, such as clearing blockages themselves
during the build phase.

- **Access to infrastructure Regulations.** In parallel to any regulatory obligations
imposed on BT following our market reviews, further rights will soon be
available to telecoms providers to gain access to physical infrastructure through
the Communications (Access to Infrastructure) Regulations 2016 (the ATI
Regulations). These measures are designed to reduce the cost of deploying
broadband networks by facilitating access to physical infrastructure across
different sectors, not only telecoms infrastructure. As part of July’s publication¹
we set out guidance on our role in these new measures including dispute
resolution.

6. **Committee’s recommendations/observations on BT’s cost of capital**

- **We recommend that Ofcom undertakes an assessment to ascertain the financial
effect of BT’s failure to invest in Openreach at its true cost of capital.**

In our Strategic Review of Digital Communications we explained that we are concerned
about the level of investment in Openreach’s network. We are looking closely at
Openreach’s incentives to invest in the local loops that support fixed telephony and
broadband, including superfast broadband, as part of our forthcoming Wholesale Local
Access review. For example, we will be looking at how we can improve quality of service
through increased minimum standards. However, there are limitations of regulation as
a means of promoting quality and that is why we are looking at other mechanisms to
increase choice for consumers and ultimately drive up quality, such as Duct and Pole
Access.

However, we do not think that there is a direct link between Openreach’s incentives to
invest and a “WACC gap”. In relation to investment in fibre, our assessment is that there is

not a single Openreach WACC (i.e. 8.8% will not necessarily be the appropriate WACC for all investments or lines of business within Openreach), and as a result of this the “WACC gap” is insufficient to explain the suggested under-investment in fibre broadband.

The Committee’s report identifies a gap of 1.6 percentage points, between the regulatory view of the Openreach copper WACC of 8.8% and the hurdle rate of 10.4%. However, the 8.8% “Openreach” WACC referred to is only applied in the regulation of the Openreach copper access business—i.e. the copper lines, or local loops, that connect customer premises to BT local exchanges. For investments used to deliver fibre broadband by Openreach, a higher WACC of 9.8% (pre-tax nominal) is likely to be appropriate.2 This is because the investment in fibre broadband is likely to exhibit higher systematic risk than the provision of standard copper lines to every premises in the UK.3

On this basis, the “WACC gap” between the BT hurdle rate (reported in the Committee’s report at 10.4%) and the regulatory view of the WACC for BT’s fibre investments is only around 60 basis points. This is unlikely to be enough of a “WACC gap” to materially explain the suggested under-investment in broadband.

In relation to investment to maintain the copper network, we think it is important to note that there are likely to be practical constraints on the investments which BT can pursue in any given year. For example, other constraints such as limits on management time or the Openreach field force of engineers (or other resources) required to deliver capital expenditure (capex) programmes may mean that investments with a rate of return only marginally above the WACC do not happen. In any event, if there is underinvestment, whatever the cause, we agree with the Committee that the right approach is to make investment more profitable by making the consequences of poor performance more costly. We believe that this is a better way of addressing the issue than attempting to oversee BT’s investment plans at a detailed level.

Finally, whilst it does not speak to appropriate levels of investment or the cost of capital, it is worth noting that, while BT appears to have shifted capex within the different parts of Openreach, this has been within a broadly stable capex envelope for Openreach in real £m terms. This is demonstrated in Figure 1 below which shows that i) overall Openreach capex was relatively stable at £1bn to £1.2bn between 2009/10 and 2014/15 before increasing in 2015/16 and ii) while expenditure on the copper network has declined, it was offset by increasing expenditure on the fibre network in the period 2009/10 to 2012/13, and from 2013/14 broadly the reverse happened (with copper capex flat then rising and fibre capex falling).

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2 Ofcom’s most recent WACC decision was in relation to the Business Connectivity Market Review (BCMR), April 2016, Annex 30, http://stakeholders.ofcom.org.uk/consultations/bcmr-2015/final-statement/. Here we explained that we continued to consider BT’s copper lines business as lower risk than its other activities and grouped the other UK telecoms services (e.g. leased lines, broadband (including fibre) and voice services) into a single category labelled “Other UK telecoms”. A final category was identified, which primarily included the unregulated services provided by BT Global Services. This was identified as higher risk than the preceding lines of business. The BCMR estimated the pre-tax nominal WACC for Openreach copper access at 8.8%, for “Other UK telecoms” at 9.8% and the “rest of BT” at 12.4%. The BT Group WACC was estimated at 9.9%.

3 A view supported by a recent report for the European Commission: Brattle Group July 2016, Review of approaches to estimate a reasonable rate of return for investments in telecoms networks in regulatory proceedings and options for EU harmonization, pages 96 - 99
Openreach capex as a proportion of BT Group capex has increased over the period from 36% in 2009/10 to 55% in 2015/16. Openreach total expenditure (totex)\(^4\) as a proportion of BT Group totex also appears to have increased (from 22% in 2009/10 to 26% in 2015/16). This is illustrated in Figure 2.

While the above analysis is relatively high-level and does not identify what an optimal level of investment by BT in Openreach as a whole (or in broadband specifically) would be, it is not clear that in recent years BT has deprioritised investment by Openreach relative to the rest of BT.

\(^4\) Totex here has been estimated from BT’s annual accounts as revenue less EBITDA plus capex.