An Update on Rural Connectivity

Seventeenth Report of Session 2017–19

Report, together with formal minutes relating to the report

Ordered by the House of Commons to be printed 9 September 2019
The Environment, Food and Rural Affairs Committee

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Summary

Digital connectivity is now regarded by many as an essential utility, with modern life increasingly difficult without it.

In 2015 our predecessor committee expressed concern that poor broadband in rural areas risked causing harm to the rural economy and leaving behind rural communities who struggled to access online services that most of the country take for granted.

Although there has been a significant improvement in both broadband and mobile coverage since 2015, it has only barely kept up with increasing demand. Many rural communities and businesses, particularly in the hardest to reach areas, still struggle as a result of poor or no access to broadband and poor coverage of mobile data services. The digital divide between urban and rural areas, and between rural towns and sparser rural settlements continues to marginalise communities and be the cause of significant frustration.

The Government has recognised that connectivity must be treated as a utility with its introduction of the broadband Universal Service Obligation (USO) and has outlined a commitment to ensure the divide between urban and rural areas is not exacerbated through various funding initiatives, a proposed “outside-in” approach in its Future Telecoms Infrastructure Review, and in recent commitments for an accelerated full-fibre roll out. However, given the continued challenges posed to rural communities and businesses, we are not confident that the Government has fully grasped the extent of the problem, the scale of the challenge, or the wider cost of poor connectivity for rural communities and the rural economy.

Our main conclusions are:

- Government policy has barely kept pace with the rate of technological change and has failed to reduce the digital divide between urban and rural areas.
- Delivering a “digital-by-default” strategy for public services, before solving the issue of poor connectivity in rural areas, has worsened the impact of the digital divide.
- The current specification for the Universal Service Obligation is inadequate. It is not truly “universal” and its minimum speed of 10Mbps will be obsolete soon after introduction.
- It is currently unclear how the Government intends to meet its accelerated target of universal full-fibre broadband by 2025.
- A “rural roaming” solution is needed to tackle partial “not-spots” in mobile coverage in the absence of a forthcoming agreement between Government and Mobile Network Operators.
1 Introduction

1. In its 2017 Digital Strategy, the Government acknowledged that “broadband and mobile must be treated as the fourth utility, with everyone benefitting from improved connectivity”. In 2018, the National Infrastructure Commission, the Government’s independent advisor on the UK’s infrastructure needs, stated that digital connectivity was now “an essential utility, as central to the UK’s society and economy as electricity or water supply”. Poor digital connectivity in rural areas therefore has far reaching consequences for communities, economies and businesses, with it being argued by some as one of the biggest challenges facing the rural economy.

2. In the 2014–2015 session, our predecessor Committee conducted a short inquiry into Rural broadband and digital-only services. It expressed concern over a premature move to digital-by-default public services, based on an assumption that adequate broadband coverage existed across rural areas. It concluded:

   There is a risk of poor rural broadband availability causing harm to farm businesses and the rural economy. It is essential that those who are ‘hardest-to-reach’ are given priority.

3. We decided to follow up on our predecessor Committee’s previous inquiry in light of ongoing concerns from rural stakeholders about reliable broadband and the continuing push to move the delivery of public services online. This Report also goes beyond our predecessor’s Report to address wider issues associated with rural connectivity, including coverage of mobile data services in rural areas. We have been concerned that since the last EFRA Committee inquiry, the digital divide between urban and rural areas has not been sufficiently reduced, and that, with new technological offerings such as full-fibre broadband connection and fifth generation mobile data technologies (5G), the divide may widen in the near future. Chapter 2 therefore provides an update on broadband and mobile coverage across the UK and identifies the current state of the “urban-rural digital divide”. Chapter 3 looks at the impact poor connectivity in rural areas has had on public service provision. Chapters 4 and 5 examine and assess Government policy towards the roll-out of broadband services (decent, superfast and full-fibre) and mobile services respectively.

4. Over two evidence sessions, the Committee heard from the Country and Land Business Association (CLA), the Rural Services Network (RSN), Action with Communities in Rural England (ACRE), Openreach, the Independent Networks Co-operative Association (INCA), Mobile UK, Ofcom and Ministers from DCMS and DEFRA. We received 52 pieces of written evidence. The written submissions and transcripts of the oral evidence sessions are published on our website. We thank everyone who contributed to this inquiry. We concluded taking oral evidence prior to the change in Prime Minister in July 2019. As far as possible we have sought to reflect subsequent changes in Government policy in this report.

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1 Department for Culture, Media and Sport (DCMS), Connectivity - building world-class digital infrastructure for the UK, March 2017
2 National Infrastructure Commission, National Infrastructure Assessment (July 2018), p 20
3 See House of Lords, Report of the Select Committee on the Rural Economy, Session 2017–19, HL Paper 330, para 239. A 2018 survey by the Countryside Alliance showed that digital infrastructure and provision of services were ranked as the two most important issues in relation to the rural economy, see House of Lords, Written evidence volume: Time for a strategy for the rural economy (April 2019), p .340, para 4
4 Environment, Food and Rural Affairs Committee, Seventh Report of Session 2014–15, Rural broadband and digital only services, HC 834, para 7
2 Rural coverage and the urban rural digital divide

Box 1: Summary of key terms

**Broadband speeds**

**Megabits (Mb)** is a unit used for expressing a quantity or amount of data. Broadband speeds are expressed as an amount of data downloaded per second, usually in **megabits per second (Mbps)**.

**Decent broadband** is defined by Ofcom as a connection capable of delivering a download speed of at least 10Mbps and an upload speed of at least 1Mbps. This the specification for the Government’s Universal Service Obligation (see Chapter 4).

**Superfast broadband** does not have a single definition. The UK Government defines it as speeds greater than 24Mbps, whereas Ofcom, the European Commission, and the Scottish and Welsh Governments define it as speeds greater than 30Mbps.

**Gigabit-capable connection** is defined by the UK government as a connection that can support 1 gigabit per second (Gbps) download or upload speeds. 1 Gbps is equal to 1000 Mbps. Gigabit speeds can be delivered by “**full-fibre**” infrastructure. (See Chapter 4).

**Mobile**

**Mobile data services** are typically delivered over a wide range of radio frequency spectrum bands (see Chapter 5). The G stands for the different generations of technology used.

- **3G** was launched in 2003 and introduced download speeds of over 5 Mbps.
- **4G** was launched in 2012 and delivered speeds of over 10 Mbps.
- **5G** is expected to deliver much faster data speeds (10–20 Gbps), higher capacity (i.e. able to work across more devices) and lower latency (faster response times).

Source: House of Commons Library and Ofcom

**Broadband coverage**

5 Ofcom, the independent regulator responsible for the UK communications industries (including broadband providers and mobile network operators), reports on the percentage of UK premises (homes and businesses) with access to fixed broadband connections of different speeds in its annual Connected Nations reports. According to Ofcom’s most recent figures (Spring 2019) 98.2 per cent of the UK has access to at least a decent broadband connection (see Figure 1). This is an increase from 96.6 per cent in May 2017 (see Figure 2). However, national average figures mask significant local disparities, which can be seen when coverage is examined at a more local or constituency level (see Annex).

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5 Superfast broadband in the UK, Briefing Paper CBP06643, House of Commons Library, 13 November 2018; Mobile coverage in the UK, Briefing Paper CBP 7069, House of Commons Library, 22 February 2019; Ofcom, Cellular Networks and Technology (June 2015), last accessed 8 September 2019

6 For constituency level data see House of Commons Library, Constituency data: broadband coverage and speeds (June 2019), last accessed 29 July 2019
Figure 1: Fixed broadband coverage: January 2019

**UK fixed broadband connectivity, January 2019**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Premises (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to download speeds of 10 Mbps or higher</td>
<td>98.2%</td>
</tr>
<tr>
<td>Access to download speeds of 30 Mbps or higher</td>
<td>94.6%</td>
</tr>
<tr>
<td>Access to download speeds of 300 Mbps or higher</td>
<td>53.2%</td>
</tr>
<tr>
<td>Access to full fibre services</td>
<td>7.1%</td>
</tr>
<tr>
<td>Unable to access a download speed of 10Mbps and an upload speed of 1Mbps (Universal Service Obligation minimum)</td>
<td>2.1%</td>
</tr>
</tbody>
</table>

Figure 2: Improvement in availability of decent broadband (10Mbps)

**Availability of 10 Mbps broadband has improved, but some rural areas still lack coverage**

Mobile coverage

6. Ofcom assesses coverage of mobile signal in three main ways: outdoor coverage, indoor coverage and coverage on A and B roads. Currently 92 per cent of the UK landmass

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7 Table provided by the House of Commons Library using data from Ofcom, [Connected Nations update: Spring 2019](https://www.ofcom.org.uk) (May 2019), last accessed 30 August 2019
8 Table provided by the House of Commons Library using data from Ofcom, [Connected Nations update: Spring 2019](https://www.ofcom.org.uk) (May 2019), last accessed 30 August 2019
is covered by at least one operator, with 67 per cent covered by all four (see Figure 3). Nationally there has been an improvement in overall mobile coverage; for example, the percentage of premises with indoor 4G coverage from all operators has increased from 64 per cent in June 2017 to 78 per cent in January 2019 (see Figure 4). Again however national figures can mask disparities between urban and rural areas when examined at a more granular level (see Annex).

**Figure 3: Mobile coverage of UK landmass**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coverage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographic landmass area covered by at least one operator</td>
<td>92.4%</td>
</tr>
<tr>
<td>Geographic landmass area covered by all four operators</td>
<td>67.0%</td>
</tr>
<tr>
<td>Geographic landmass area not covered by any operator</td>
<td>7.6%</td>
</tr>
<tr>
<td>Premises with indoor coverage from all four operators</td>
<td>78.4%</td>
</tr>
<tr>
<td>A &amp; B roads covered by all operators</td>
<td>57.3%</td>
</tr>
<tr>
<td>A &amp; B roads not covered by any operator</td>
<td>3.9%</td>
</tr>
</tbody>
</table>

**Voice and text coverage**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coverage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographic landmass area covered by all four operators</td>
<td>78.2%</td>
</tr>
<tr>
<td>Geographic landmass area not covered by any operator</td>
<td>5.0%</td>
</tr>
<tr>
<td>Premises with indoor coverage from all operators</td>
<td>92.3%</td>
</tr>
<tr>
<td>A &amp; B roads covered by all operators</td>
<td>75.6%</td>
</tr>
<tr>
<td>A &amp; B roads not covered by any operator</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

**Figure 4: Improvement in mobile coverage since 2017**

4G mobile coverage in rural areas has improved since 2017 but remains 40% below urban coverage

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10 Table provided by the House of Commons Library using data from Ofcom, *Connected Nations update: Spring 2019* (May 2019), last accessed 30 August 2019
11 Table provided by the House of Commons Library using data from Ofcom, *Connected Nations update: Spring 2019* (May 2019), last accessed 30 August 2019
The continuing urban rural digital divide

7. As the coverage figures show, despite improvements since our predecessor Committee’s inquiry, an urban rural divide still exists for both broadband and mobile coverage (see Figures 5 and 6). Broadly, although broadband and mobile coverage has improved in rural areas, it has done little better than keep pace with the improving service provision in urban areas, meaning a gap has persisted.

Figure 5: The urban-rural divide for broadband coverage (Spring 2019)\textsuperscript{12}

Figure 6: The urban-rural divide for 4G mobile coverage (Spring 2019)\textsuperscript{13}

\textsuperscript{12} Chart provided by the House of Commons Library using data from Ofcom, \textit{Connected Nations update: Spring 2019} (May 2019), last accessed 30 August 2019

\textsuperscript{13} Chart provided by the House of Commons Library using data from Ofcom, \textit{Connected Nations update: Spring 2019} (May 2019), last accessed 30 August 2019
8. Mark Bridgeman, Vice President of the Country Land and Business Association (CLA) summarised that since our predecessor’s last report there had been “huge progress” in the roll out of broadband; but that there was still a “rural-urban gap” with only 1 per cent of people in urban areas not having access to “basic” 10Mbps broadband versus 12 per cent in rural areas.14 He also stressed the importance of mobile technology for solving the issue of connectivity to the “final few” without access to decent broadband.15 Graham Biggs, CEO of the Rural Services Network (RSN) suggested that “for those for whom [broadband coverage] has improved, it has improved significantly” but “for the rest, the gap between their experience and even the others in rural areas, let alone those in more urban areas, has actually got wider.”16 Jeremy Leggett, Rural Policy Adviser, Action with Communities in Rural England (ACRE) agreed, but further warned that the urban rural digital divide could increase if gigabit-capable infrastructure was not developed at the same pace or faster compared to urban areas, potentially creating a “two-speed economy and two-speed societies”.17

9. National broadband coverage statistics measure access to a service as opposed to take up. They also do not account for the quality of the service received, especially that many consumers perceive that they do not get the download speeds that they have been advertised. This difference goes some way to explaining poor consumer experience: for example, research undertaken by Rural England CIC and Scotland’s Rural College in March 2018, commissioned by Amazon, noted that 37 per cent of respondents rated their internet connection speed as very poor or poor, and 25 per cent rated reliability as a significant concern.18

10. Traditionally, operators used to advertise “up to” speeds, a maximum possible speed that might only be available to a small number of consumers. Lindsey Fussell, Group Director, Ofcom, stated that Ofcom had done a lot of work with the Advertising Standards Authority to change this, and explained that operators are no longer able to advertise “up to” speeds but had to provide average speeds available at peak times to at least 50 per cent.19 She further explained that Ofcom now required operators to quote consumers a range that reflects the speed consumers should see at peak times, noting that this “should pick up those people who are on long copper lines”, such as many premises in rural areas. However, she acknowledged that for consumers at the end of particularly long copper lines, or with almost no connectivity at all, that this measure would “not relieve [their] frustration”.20 Ofcom also conducts sample research, which includes placing devices inside consumers’ homes to try to measure the actual speed people get, to “sense check” the speeds that operators report.21 She stated this sample research was conducted in rural as well as urban areas.22

11. For mobile data services, according to the Local Government Association (LGA), “country-wide coverage figures tend to mask the deep disparity between coverage in urban and rural areas” and “Ofcom’s latest figures reveal only 62 per cent of rural geographic

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14 Q2
15 Q7
16 Q6
17 Q7
18 Amazon, Unlocking the digital potential of rural areas across the UK (March 2018), p 27
19 Q185
20 Q185
21 Q188
22 Q188
landmass can receive a 4G signal from all operators, compared to 97 per cent of urban areas.\textsuperscript{23} Furthermore, local councils found Mobile Network Operators’ (MNOs) coverage data did not reflect consumers’ experience, and that councils were increasingly conducting their own independent coverage analyses and finding different results.\textsuperscript{24} The Rural Services Network explained that two particular issues experienced with mobile provision in rural areas were weak signal strength indoors and network coverage in the open countryside.\textsuperscript{25} The National Farmers’ Union (NFU) broadband and mobile survey 2018 supported this, showing that “only 19% reported that they could receive a reliable mobile phone signal in all indoor locations on farm and only 17% had a reliable service for outdoor locations on farm”; and that these figures had changed little since 2015.\textsuperscript{26} Conversely, Mobile UK, representing the four MNOs, commented that since our predecessor’s 2015 inquiry, “enormous strides” had been made; in 2015 only 8 per cent of the UK’s landmass had any 4G coverage whereas now only 8 per cent does not.\textsuperscript{27}

The increasing need for better connectivity

12. The frustration from rural communities over connectivity and the urban-rural digital divide has increased at a time when people have become increasingly reliant on good broadband and mobile connections. According to Ofcom’s Connected Nations Report 2018, “people’s expectations of communications services continue to grow”.\textsuperscript{28} Data traffic over fixed broadband networks is increasing considerably year on year; Ofcom stated that in 2018 people used an average of 240GB a month on a fixed connection, approximately the equivalent of downloading 160 films, a growth of 26 per cent from the previous year.\textsuperscript{29} Given improvements in mobile data services, people also spent an average of two and a half hours a week online when they were not at home or work.\textsuperscript{30} These trends are expected to increase as companies invest in new technologies such as full-fibre and 5G.\textsuperscript{31}

13. Margot James MP, the then Digital Minister at the Department for Digital, Culture, Media and Sport (DCMS), suggested that the Government’s Future Telecoms Infrastructure Review (FTIR) published in 2018 demonstrated its desire to ensure the divide between rural and urban areas was “not exacerbated”.\textsuperscript{32} She accepted that rural areas had not been prioritised in the rollout of superfast broadband between 2015 and 2018, and explained that recent programmes, such as the Rural Gigabit Connectivity programme, aimed to “compensate” for this.\textsuperscript{33} Lord Gardiner of Kimble, the Rural Affairs Minister in the Department for Environment, Food and Rural Affairs (DEFRA), acknowledged that there was still an urban rural “divide”, as well as differing levels of connection within rural villages themselves.\textsuperscript{34} He noted that where villages were getting connected, and benefiting from further improvements, sparser areas such as farms and hamlets were not (see, for

\textsuperscript{23} Local Government Association (LGA) (RBD0010), para 3.10
\textsuperscript{24} Local Government Association (LGA) (RBD0010), para 3.11
\textsuperscript{25} Rural Services Network (RBD0012), para 7
\textsuperscript{26} National Farmers’ Union (RBD0025), p 2
\textsuperscript{27} Mobile UK (RBD0041), para 12
\textsuperscript{28} Ofcom, Connected Nations 2018: UK Report (December 2018), p 2
\textsuperscript{29} Ofcom, Connected Nations 2018: UK Report (December 2018), p 2
\textsuperscript{30} Ofcom, Connected Nations 2018: UK Report (December 2018), p 2
\textsuperscript{31} Ofcom, Connected Nations 2018: UK Report (December 2018), p 2
\textsuperscript{32} Q115
\textsuperscript{33} Q115. For summary of the delivery phases of the Government’s superfast broadband programme see Superfast broadband in the UK, Briefing Paper CBP06643, House of Commons Library, 13 November 2018, p 14
\textsuperscript{34} Q113
example, Figure 7). He explained that, whilst DCMS had the lead on national statistics, as the Government’s rural champion, he could not rest until all communities had “the contemporary life that both broadband and mobile coverage provide”.

Figure 7: Premises unable to receive decent broadband in England by urban rural classification

<table>
<thead>
<tr>
<th>Rural-urban classification</th>
<th>Premises unable to receive decent broadband</th>
<th>Total premises</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
</tr>
<tr>
<td>RURAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural hamlets &amp; isolated dwellings (sparse setting)</td>
<td>21,831</td>
<td>32.2%</td>
</tr>
<tr>
<td>Rural hamlets &amp; isolated dwellings</td>
<td>160,541</td>
<td>21.3%</td>
</tr>
<tr>
<td>Rural village (sparse setting)</td>
<td>6,981</td>
<td>8.0%</td>
</tr>
<tr>
<td>Rural village</td>
<td>84,194</td>
<td>6.5%</td>
</tr>
<tr>
<td>Rural town &amp; fringe</td>
<td>15,307</td>
<td>0.7%</td>
</tr>
<tr>
<td>Rural town &amp; fringe (sparse setting)</td>
<td>457</td>
<td>0.4%</td>
</tr>
<tr>
<td>URBAN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban minor conurbation</td>
<td>6,775</td>
<td>0.8%</td>
</tr>
<tr>
<td>Urban city &amp; town</td>
<td>79,400</td>
<td>0.7%</td>
</tr>
<tr>
<td>Urban major conurbation</td>
<td>58,222</td>
<td>0.7%</td>
</tr>
<tr>
<td>Urban city &amp; town (sparse setting)</td>
<td>105</td>
<td>0.2%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>433,813</td>
<td>1.8%</td>
</tr>
</tbody>
</table>

14. There are a number of different technological solutions to provide connectivity to rural areas. There is in addition a confusing array of overlapping definitions, for example the different definitions of speeds accessible to consumers. To minimise confusion, where possible the Government, Ofcom and the devolved administrations should align their definitions. For example, the Government should adopt the definition of superfast broadband as 30 Mbps.

15. Despite coverage improvements since our predecessor Committee’s inquiry in 2015, there are still clear disparities in broadband and mobile coverage between urban and rural areas, and between rural villages and sparser rural settlements. These divides are the cause of much frustration. The amount of data being used each year is increasing dramatically as people become gradually more reliant on good connection and fast speeds to engage in society. Poor coverage, exacerbated by the urban rural digital divide, is therefore increasingly impacting upon the quality of life in rural areas. This is worsened by the need to access services online; the Government going increasingly digital and rural agricultural payments requiring to be applied for online.

16. Further frustration is caused by the unreliability of broadband connections, especially where the actual speed experienced is slower than the maximum download speed advertised. We therefore support the work Ofcom has done with the Advertising Standards Agency to ensure advertised speeds accurately reflect the consumer.

35 Q113
36 Q113
37 Table provided by the House of Commons Library using data from Ofcom, Connected Nations update: Spring 2019 (May 2019), last accessed 30 August 2019; See Annex for similar breakdowns for UK nations (by rural/urban classifications)
experience. Ofcom should continue to refine how broadband speeds are measured and advertised to the consumer, so that consumers are fully aware of the speeds they can get. In response to this Report, Ofcom should update us on whether the changes they have made so far have improved the consumer experience, particularly in rural areas where there are still long copper wire connections.

17. Government acknowledges digital connectivity as a utility service. Rural communities therefore both need and deserve to have the same level of coverage as that experienced in urban areas, so they can run productive businesses and enjoy family life. The Government must continually invest in rural areas to reduce the disparities in digital connectivity between urban and rural areas, and between rural villages and sparser rural settlements. Previous interventions have, at best, kept the gap stable. The roll-out of new technologies such as full-fibre and 5G mobile data represent an opportunity for a step change, but also a risk that rural areas are left further behind. Therefore, in addition to national coverage targets, the Government should set specific targets for reducing the urban rural divide and put in place the investment to achieve them.

The impact on rural businesses

18. The impact of poor broadband and mobile coverage on rural businesses was one of the most commonly expressed concerns regarding the urban rural digital divide. The NFU noted the impact of digital infrastructure on business investment cases citing a Confederation of British Industry (CBI) figure that 82 per cent of firms said that the quality and reliability of the digital infrastructure were significant factors when they were deciding where to invest.38 Numerous district and county councils highlighted the impact upon businesses within their areas: Leicestershire County Council noted that between 2016 and 2017, rural areas of the county saw a modest 1.2 per cent rise in the number of new business, compared with a 10 per cent increase in urban parts of the county.39 It also stated that in Leicestershire alone, there were more than 3,600 rural business without adequate broadband.40 Derbyshire Dales District Council quoted an October 2018 survey of businesses in the district which found that 81 per cent of businesses thought that fast reliable broadband was “imperative or very important” and that 62 per cent experienced problems with speed and reliability (such as broadband dropping out during the day).41 Hambleton District Council warned that lack of broadband and mobile would lead to existing businesses relocating to towns and cities, with no new businesses being established in their place.42 The National Association of Local Councils (NALC) highlighted that rural areas had the highest numbers of home workers, which exacerbated the impact of poor connectivity.43 It argued that the continued increase in the number of home workers should have provided a “wake-up call” to Government for the need for improved broadband and other digital services.44

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38 National Farmers’ Union (RBD0025), para 19
39 Leicestershire County Council (RBD0015), para 2.1.7
40 Leicestershire County Council (RBD0015), para 2.1.7
41 Derbyshire Dales District Council (RBD0008), para 13
42 Hambleton District Council (RBD0021), para 2
43 NALC (RBD0009), para 14
44 NALC (RBD0009), para 14
19. Margot James MP told us that the challenges faced by rural businesses concerning connectivity were “unacceptable”.\textsuperscript{45} She sought to assure us that the Government was “doing everything we can, within the current constructs of public expenditure constraints and regulations, to motor on this, [to reduce] the number of businesses suffering”.\textsuperscript{46} Lord Gardiner pointed out that DEFRA’s Rural Development Programme for England (RDPE) available funding for rural broadband projects had recently increased to £79 million, and that the primary purpose of this money was to fund faster speeds for businesses in the hardest to reach rural areas.\textsuperscript{47} However, the Government does not currently hold data on the number of businesses that have gone out of business or have had to relocate due to poor connectivity.\textsuperscript{48}

20. Rural businesses are suffering considerably due to poor digital connectivity. Whilst we welcome the Government’s commitment to fixing the problem, the fact it has not collected specific information regarding the number of affected businesses, and the wider cost to the rural economy, as a precursor to designing effective policy, calls into question the priority it places on it. The Government should further increase its available funding for rural broadband projects, for example through DEFRA’s Rural Development Programme for England. Allocation of funding to the devolved nations should be needs based rather than Barnett allocations; for example, Scotland requires coverage to be provided to the west coast islands as well as Orkney and Shetland in the north, providing additional remote rural challenges. There should be greater transparency on how the UK Government estimates costs for its broadband programme and allocates funding across the UK. The Government should also conduct research into the impact poor connectivity is having on businesses in the rural economy, and the wider impact this is having on the national economy to underpin the case for longer-term action.

\textsuperscript{45} Q119  
\textsuperscript{46} Q119  
\textsuperscript{47} O 154; The Department of Environment, Food and Rural Affairs (RBD0054), p 1  
\textsuperscript{48} The Department of Environment, Food and Rural Affairs (RBD0054), p 1
3 Digital public services in rural areas

21. In 2010, the Coalition Government embarked upon a process of making public services “digital by default”, whereby, if possible, the primary mode of delivering all public services should be online or digital.\(^{49}\) In the 2017 UK Digital Strategy, the Government continued this policy trend, supporting the transformation of services and systems using digital technology to “make them easier, simpler and cheaper”.\(^{50}\) The 2017 UK Digital Strategy stated that “digital connectivity is now a utility, and modern life is increasingly impossible without it”.\(^{51}\)

22. In its 2015 Report, our predecessor Committee concluded that “beyond business purposes, householders, particularly in rural communities, are being left behind in accessing online services that most of the country can take for granted”.\(^{52}\) Four years on, evidence to our inquiry has highlighted a number of digital public services that are affected by poor connectivity, and which have exacerbated the effect of the urban rural divide for rural communities:

- **Healthcare and social services**: Numerous submissions expressed concern that poor connectivity was currently affecting healthcare and social service provision, with Cumbria County Council commenting that online access to healthcare was “increasingly critical”.\(^{53}\) The CLA argued that improved connectivity has huge potential for improved healthcare and social care in rural areas, with the potential to provide some forms of care straight to the home.\(^{54}\) The Government has recognised this potential, for example with a £4.2 billion planned investment in the next 5 years in digital health.\(^{55}\)

- **Education**: Numerous submissions pointed out that children are disadvantaged in terms of educational opportunities and the facilities offered by fast connectivity.\(^{56}\) Lothian Broadband Networks Ltd raised that homework tasks are increasingly delivered over the internet; for example, many of the resources on BBC Bitesize require access to video and audio streaming functions.\(^{57}\)

- **Access to legal services**: The Law Society of Scotland identified that courts and tribunals systems, such as employment tribunal cases, were now almost exclusively online, with criminal courts anticipated to make the same shift.\(^{58}\) Jeremy Leggett, ACRE, told us that it was “simply not acceptable” to close rural magistrates’ courts on the basis that there were increasing online alternatives.\(^{59}\)

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49 Cabinet Office, *Digital by default proposed for government services* (November 2010), last accessed 29 August 2019; This excluded services, such as some healthcare, that require human contact
50 DCMS, *UK Digital Strategy: Executive Summary* (March 2017), last accessed 29 August 2019
51 DCMS, *UK Digital Strategy: Executive Summary* (March 2017, last accessed 29 August 2019
52 Environment, Food and Rural Affairs Committee, Seventh Report of Session 2014–15, Rural broadband and digital only services, HC 834, para 13
53 Cumbria County Council (RBD0026), para 2.2.2; see also Cheshire East Council (RBD0038), para 12; Lothian Broadband Networks Limited (RBD0036), para 2.1.3
54 CLA (RBD0011), para 29
55 Local Government Association (LGA) (RBD0010), para 6.2
56 Lothian Broadband Networks Limited (RBD0036), para 2.1.3; Hampshire Rural Forum (RBD0019), para 4.2; Mr Paolo Gerli (RBD0034), para 14; Cumbria County Council (RBD0026), para 2.6.2; Cornwall and Isles of Scilly Local Enterprise Partnership (RBD0023), para 7; East Riding of Yorkshire Council (RBD0017), para 1.4
57 Lothian Broadband Networks Limited (RBD0036), para 2.1.3
58 Law Society of Scotland (RBD0022), para 17
59 Q39
• **Farm payments**: Many farm governance activities require use of online systems, such as processing payments and completing compulsory livestock movement notifications.\(^{60}\) As identified in our predecessor’s 2015 report, farmers are often located in areas with particularly poor connectivity.\(^{61}\) The CLA noted that to access official government systems, such as the Rural Payments Agency, farmers were having to use third party agents as a result of poor or no broadband, at additional cost to the business.\(^{62}\)

• **Making Tax Digital**: The Association of Convenience Stores highlighted that HMRC’s Making Tax Digital reforms, which seek to fully digitise the tax system by 2020 and which require compatible software to keep digital records, have underlined the importance of reliable internet connections for rural businesses.\(^{63}\)

23. Beyond public service provision, our evidence showed that increasingly digital delivery of other essential services, such as banking and personal finance is also disproportionately affecting rural areas with poorer connectivity. For example, Which? analysis found that the UK has lost almost two thirds of its bank branches in the last 30 years, with over 3,000 branches closing across the country since 2015.\(^{64}\) This has left a fifth of households more than three kilometres from their nearest branch.\(^{65}\) Its research also found that 4,692 cashpoints were closed in 2018.\(^{66}\)

24. The CLA argued that the rationale behind increasing digitisation of public services was “sound” as it was “more efficient and saves resource, which can be allocated elsewhere”.\(^{67}\) According to the LGA, 89 per cent of residents are “willing to use additional digital services when they become available”.\(^{68}\) However, the LGA did warn that any transition to digital public services was “premature” without adequate connectivity for all.\(^{69}\)

25. More broadly there was considerable concern about the implications of a digital by default approach to public services policy in relation to rural communities, with the Countryside Alliance stressing that “remote rural communities must not be penalised by paying an excessive connection charge to access basic services.”\(^{70}\) The Law Society of Scotland cautioned that the growing transition to online platforms caused “the potential for discrimination against certain individuals who may have limited or no access to online services, yet have no alternative means”.\(^{71}\) ACRE stated that, given the eve of hyper-connectivity via full-fibre and 5G, “not to ensure that rural areas have equal access to these technologies is to condemn the 17% of people who live there either to being forced to move away or to a second-class form of citizenship”.\(^{72}\) It suggested that Government needed to better assess the costs and requirements that fell on citizens, customers and

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\(^{60}\) University of Aberdeen ([RBD0016](#)), para 5

\(^{61}\) Environment, Food and Rural Affairs Committee, Seventh Report of Session 2014–15, _Rural broadband and digital only services_, HC 834, para 41

\(^{62}\) CLA ([RBD0011](#)), para 28

\(^{63}\) Association of Convenience Stores ([RBD0028](#)), para 3; HMRC, _Overview of Making Tax Digital_, last accessed 4 September 2019

\(^{64}\) Which? ([RBD0029](#)), para 16

\(^{65}\) Which? ([RBD0029](#)), para 16

\(^{66}\) Which? ([RBD0029](#)), para 16

\(^{67}\) CLA ([RBD0011](#)), para 28

\(^{68}\) Local Government Association (LGA) ([RBD0010](#)), para 6.1

\(^{69}\) Local Government Association (LGA) ([RBD0010](#)), para 6.1

\(^{70}\) Countryside Alliance ([RBD0043](#)), para 5

\(^{71}\) Law Society of Scotland ([RBD0022](#)), para 20

\(^{72}\) Action with Communities in Rural England ([RBD0019](#)), para 6
clients, as well as itself, before embarking upon a “comprehensive delivery philosophy” such as digital by default.73 Professor Claire Wallace and Dr Lorna Philip, two academics specializing in the urban rural divide, recommended that future digital services policies should reflect “needs not numbers” to ensure that the rural minority had the same digital opportunities as the urban majority.74

26. Leicestershire County Council argued that a digital by default approach was “essential” within “the climate of continuing budget pressures” on local authorities.75 It argued that it was “not financially viable for any local authority to put service transformation on hold due to broadband coverage limitations”, suggesting that “good digital connectivity” was the one strand in the design and implementation of digital public services that was not being considered, and stating that rural connectivity was at “crisis point” and needed “urgent attention and action”.76

27. Lord Gardiner of Kimble accepted that “until we get to the truly universal figure, there will always be people who do not have access” to services online.77 He explained that it was Government policy that there must be alternatives to the online facility and that he knew of no public service that was digital only.78 He concluded that it was “really important, as we bear down on the gap, that we do not impose digital if people simply cannot avail themselves of it.”79

28. Margot James MP explained to us that the design of digital public services across Government was administered by the Government Digital Service (GDS), in the Cabinet Office.80 DCMS told us that GDS also created accessibility guidance and standards for all of government.81 It was unclear from the Minister’s evidence whether the minimum connection speed that users would require to make a system work, and whether these speeds were available to all consumers, were considered across Government in the design process of digital public services.82 Referring to the design of Making Tax Digital, Margot James told us that she was “not aware of any assessment the Treasury has made” regarding required download speeds.83 She did however point out that, with access to 10Mbps under the forthcoming Universal Service Obligation (USO), businesses would have adequate speeds to return tax forms online with no connectivity problem.84 Conversely, Lord Gardiner stated that DEFRA did consider download speeds in designing its public facing services.85

29. When asked how much the failure to deliver effective broadband to the remaining rural areas had cost Government in terms of lost revenue or increased costs in delivering a
public service, Margot James MP explained that she was “not aware of any studies in that regard”, but that there were studies that demonstrated the improved productivity of faster broadband speeds when they are introduced.86

30. **In theory, digital public services could particularly benefit people in rural areas who live further away from physical services.** However, continuing to deliver a “digital-by-default” strategy for public services, before solving the issue of connectivity in rural areas, has the potential to worsen the impact of the digital divide. Many people living in rural areas are struggling to access basic services due to poor connectivity and the increasing difficulty of accessing these services offline. Local councils and other local service providers are potentially being driven to develop cheaper digital services, further penalising rural communities due to a lack of consideration from central government towards the realities of poor connectivity. If digital connectivity is truly considered a utility, rural communities should not be denied it. Given the continued shift towards increasingly digital public services, the Government must prioritise delivering improved connectivity for people, primarily in rural areas, with no access to adequate broadband or reliable mobile signal. In the interim poor connectivity should be taken into account in the assumptions Government departments and the Treasury make on the savings possible via digital service transformation when allocating funds for local services.

31. It is unclear whether there is any level consideration of rural needs across central Government in the design of digital public services platforms and policies. **There should be requirements across Government to take account of connection speeds available in rural areas in the process of designing or updating digital public service platforms. In their response to this Report the Government should outline what work is currently done to ensure this. Any new digital public service platforms should also be trialled and assessed by rural stakeholders prior to roll out to ensure they are user friendly.**

32. The business case for public investment in rural connectivity is strengthened when account is taken of the additional costs in delivery of services to significant numbers of people in rural areas who are unable to access those services digitally. **The Government should therefore collect, publish, and build this data into future investment decisions.**
4 Broadband

Box 2: Summary of key terms

Broadband services to premises in the UK are delivered via two types of infrastructure:

- **Fixed line infrastructure** provides static broadband connections via networks of copper, fibre-optic or co-axial, cables. The main technologies used are **Fibre to the Cabinet (FTTC)** and **Fibre to the Premises (FTTP or “full-fibre”).**

- **Wireless infrastructure** provides internet connectivity through mobile (3G and 4G) or satellite technology. Satellite services are provided via either fixed or mobile receivers.

**Fibre to the Cabinet (FTTC)** is still the main technology used to provide superfast broadband. Fibre optic cables are used from the telephone exchange to street cabinets and then existing copper lines are used from the cabinet to the premises. This technology can provide speeds of up to 76 Mbps, but speed decreases with distance from the cabinet.

**Fibre to the Premises (FTTP or “Full-fibre”)** is a technology where the fibre optic cable runs all the way to the premises or home, without needing to go via a cabinet. Full-fibre networks can deliver speeds of up to 1 Gigabit per second (Gpbs). Speed is not affected by the distance from the exchange.

**Full-fibre infrastructure** is also important for mobile broadband, particularly future 5G networks, because the masts that transmit mobile broadband must be connected to a core internet network. The connection between a mobile mast and the core network is called “backhaul”.

The power to legislate for telecommunications (including broadband services) is reserved to the UK Government. However, the practical delivery of broadband roll-out is led by local bodies in England and the devolved administrations in Scotland, Wales and Northern Ireland. This means that local bodies in England and the devolved administrations can develop their own broadband strategies to guide infrastructure build in their region, and set roll-out targets that are more ambitious than those set at the UK Government level.

Source: House of Commons Library

33. Building Digital UK (previously “Broadband Delivery UK”, referred to as BDUK) is the part of DCMS responsible for delivering broadband to the UK. BDUK is currently pursuing improved broadband delivery across the UK via three main policies. First, it is seeking to ensure that everyone across the UK has a right to request a minimum broadband connection via a broadband Universal Service Obligation (USO), set to be introduced

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88 DCMS, Building Digital UK (May 2019), last accessed 29 August 2019
in 2020. Second, it is supporting investment to provide increased superfast broadband coverage beyond the 95 per cent level achieved in December 2017.\footnote{DCMS, \textit{Building Digital UK} (May 2019), last accessed 29 August 2019} Third, it is responsible for the roll out of local full-fibre networks.\footnote{DCMS, \textit{Building Digital UK} (May 2019), last accessed 29 August 2019} This chapter examines these policies in turn.

The Universal Service Obligation (USO)

34. The Digital Economy Act 2017 established a UK-wide minimum standard for access to broadband. This Universal Service Obligation (USO) provides eligible consumers and businesses a legal right to request a broadband connection of at least 10Mbps and upload speeds of at least 1Mbps.\footnote{The Universal Service Obligation (USO) for Broadband, Briefing Paper, \textit{CBP 8146}, House of Commons Library, June 24, p 5} It is intended to act as a “safety net” for areas where superfast or full-fibre deployment make take longer to deliver.\footnote{BT Group (RBD0048), para 28}

35. As of January 2019, approximately 600,000 premises (2.1% of the UK) had existing connections below the USO criteria (see Chapter 1, Figure 1). Consumers and businesses are eligible to request a connection under the USO if they do not have access to a decent broadband connection (i.e. 10Mbps), or the only available decent broadband connection available costs more than £45 per month; and the connection will cost no more than £3,400 to build (the customer can choose to pay the excess above that amount).\footnote{The Universal Service Obligation (USO) for Broadband, Briefing Paper, \textit{CBP 8146}, House of Commons Library, June 24, p 5} To reduce the cost of getting a connection, it is possible for consumers in a given area to aggregate their demand.\footnote{The Universal Service Obligation (USO) for Broadband, Briefing Paper, \textit{CBP 8146}, House of Commons Library, June 24, p 5} Ofcom’s analysis in 2016 stated the £3,400 threshold will enable coverage of up to 99.8 per cent of UK premises.\footnote{Ofcom, \textit{Achieving decent broadband connectivity for everyone} (December 2016)} Ofcom estimated that of the 60,000 premises (0.2 per cent) above the threshold:

- 25,000 premises would cost between £3,400 and £5,000 to connect;
- 23,000 premises would cost between £5,000 and £10,000 to connect; and
- 12,000 premises would cost over £10,000 to connect.\footnote{Department for Digital, Culture, Media and Sport (RBD0046), p 3}

36. The USO is set for rollout in March 2020. Ofcom is responsible for implementing the USO, having outlined the specification for the USO in technical advice to the Government in 2016 based on the average needs of a typical household.\footnote{Ofcom, \textit{Statement: Delivering the Broadband Universal Service} (June 2019), last accessed 30 August 2019} Ofcom confirmed the final details for the rollout in June 2019, which designated BT (and KCOM in Kingston-upon-Hull) as the Universal Service Providers responsible for taking requests for connection and building the necessary infrastructure to deliver them.\footnote{Ofcom, \textit{Statement: Delivering the Broadband Universal Service} (June 2019), last accessed 30 August 2019} Under the Digital Economy
Act 2017, the Secretary of State has the power to direct Ofcom to review the USO at any time. 99 There is a requirement to review the USO when the uptake of superfast broadband reaches at least 75 per cent of the UK. 100

37. Overall, in our evidence there was wide approval for the principle of the USO. 101 However, there were several broad criticisms regarding the USO’s specification, as well as concerns over the proposals for its implementation and delivery.

**Poor download and upload speeds**

38. There was concern that, given the increasing speeds people are using every year, the USO specification of 10 Mbps was set too low:

**Alan Brown:** Given that Openreach says the speeds people need increase by 30% to 40% each year, how soon is it before the 10 Mbps becomes obsolete? You said it is a bare minimum, but how soon is it before that 10 Mbps really becomes inadequate?

**Jeremy Leggett, Rural Policy Adviser, ACRE:** At the time it is implemented, I should think. 102

Graham Biggs, CEO, Rural Services Network, agreed that the 10Mbps speed was “virtually obsolete” already given that it was modelled on the minimum standard for an average family and not a business, so by the time it was implemented there would be a desire to change it. 103 Mr Paolo Gerli and Professor Jason Whalley noted that the USO speed of 10Mbps was “considerably slower” than average speeds within the UK, which have risen from 12Mbps in 2012 to 46.2Mbps in 2017, and argued the USO would “not close the digital divide that exists.” 104

39. The CLA disagreed that the USO specification was too unambitious, arguing that the minimum speed was an “excellent start.” 105 It argued instead that the “importance and principle of the USO” had to be understood, as a legal right to a broadband connection with a sufficient speed. 106 BT acknowledged that it may be necessary to review the current USO specification as demand for higher speed increases, but stated that “a USO compliant service can satisfy much of the demand currently in the market”. 107 BT also noted that the current USO service specification was one of the highest in Europe with the equivalent in Spain and Finland set at 1 Mbps. 108

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99 Digital Economy Act 2017, Clause 1(7)(72A)(1)
100 Digital Economy Act 2017, Clause 1(7)(72B)(1)(b)
101 For example CLA (RBD0011), para 20; Countryside Alliance (RBD0043), para 24; National Farmers’ Union (RBD0025), para 21
102 Q18; See also Lothian Broadband Networks Limited (RBD0036), para 3.1.1; Leicestershire County Council (RBD0015), para 3.1.2; Mr Paolo Gerli (RBD0034), para 6–8
103 On 19–20
104 Mr Paolo Gerli (RBD0034), para 5
105 CLA (RBD0011), para 21
106 CLA (RBD0011), para 21
107 BT Group (RBD0048), paras 29–30
108 BT Group (RBD0048), para 29


Not a “universal” service

40. Mark Bridgeman, Vice President of the CLA, criticized the £3,400 cap on the cost of connections, stating that it would “not be enough to get to the final few.” The Rural Services Network stated that the £3,400 cap placed “a cost penalty on isolated rural customers” and therefore discriminated against them. The NFU expressed a specific concern that it was set too low to permit the USO to be delivered to many farm properties. It suggested that consumers expected the USO to be targeted at these very properties “given the spirit of the Government’s announcement” to ensure that “no-one is left behind”. The Law Society of Scotland also expressed concern that the USO was not in fact a “universal” service, and predicted that this would have a particularly negative impact in a Scottish context where there are a higher proportion of remote rural communities than in other parts of the UK.

41. Addressing the estimated 99.8% coverage figure for the USO stated in 2016, Lindsey Fussell, Group Director Consumer and External Relations, Ofcom, told us that it did not know the exact number of properties that currently fell outside the £3,400 threshold. She explained that raising the limit slightly would “not necessarily bring in lots more properties” given the steep cost curve to reach properties above approximately 99.5 per cent of coverage. DCMS explained that the Government’s rationale for the £3,400 threshold was to strike “a proportionate balance between providing widespread coverage and mitigating the potential financial impact on industry (and consumers).”

Implementation and delivery

42. The Countryside Alliance expressed concern about delivery of the USO, suggesting that the figures quoted by Government under reported the number of homes receiving less than the minimum service. It argued that lessons needed to be learnt from previous BDUK projects over the accuracy of data, and that further modelling work was required to ensure the USO really delivers. Mark Bridgeman told us that the USO needed to be delivered “as soon as possible” and stressed that there needed to be a clear system in place for households and businesses on the process to request the USO, and the time it would take. Consumer group Which? expressed disappointment that only 80% of USO connections needed to be delivered within 12 months “when many people have already waited far too long to get a decent broadband connection”. The Local Government Association expressed concern over how competitively priced a USO service would be, given that BT and KCOM (which only operates in a limited area) were the only designated universal service providers.
43. There were also concerns that implementing the broadband USO might happen at the expense of completing other activity, such as the BDUK (superfast broadband) programme, and the Scottish Government’s R100 programme. Mike Kiely, Founder of the advisory organisation The Bit Commons, stated that the USO was “mis-timed”, potentially substituting BDUK’s superfast broadband work with a “lesser service”; he argued it added nothing which could not be planned using existing funding.

44. Of the approximately 600,000 premises that currently cannot get the USO minimum service, BT has assessed that its “Fixed Wireless Access” (FWA) mobile service “4G EE Home”, can already connect around 75% (450,000) with a commercial service that would exceed the minimum standard. BT has stated that typical speeds for this service are around 30Mbps, with some tests delivering speeds of over 100Mbps. BT has also agreed with Ofcom that when it is the only provider in an area, it will offer at least one USO compliant service (FWA or fixed) at no more than £45 a month, with only inflation related increases permitted. For the remainder, BT explained that it planned to extend fibre services through Openreach. BT also explained that prior to March 2020, it was introducing a designated USO customer service centre. Through this centre, people would be able to request a USO service, and find out if they were eligible for the service (for example, under the £3,400 threshold) within 30 days.

45. Concern was expressed about the reliance on alternative technologies, such as Fixed Wireless Access, to deliver the USO. Mike Kiely, The Bit Commons, suggested that, given these were “rural areas where upgrades may happen once in a generation”, radio-based solutions had more limitations and higher operational costs than fixed fibre solutions once installed. This “safety-net” could therefore, in effect, also impose a “ceiling” on what premises could receive. More broadly, the NFU warned that the current USO proposal could “distort the developing rural superfast broadband market”, delivering a “second class service” that was not “future proofed”. It stressed that the USO should form one part of an integrated approach that ensured all farmers and rural communities could take full advantages of the opportunities offered by a digital economy.

46. DCMS has stated “the government is committed to keeping the USO specification under review, to ensure that it keeps pace with consumers’ needs as they evolve over time” and that “any review would look not just at the minimum download and upload speeds, but at all aspects of the USO specification”. On being asked whether the USO should be urgently reviewed, Margot James MP told us that it was “not appropriate to review the whole specification before it comes into effect” as such a review might delay its introduction. She challenged the arguments that the current specifications could be a barrier to harder-to-reach areas, stressing that it was intended as “minimum” and a “safety
net”, and did not conflict with any of the Government’s other programmes.\(^{135}\) She did however accept that the service was not truly universal, with some people excluded by the cost threshold, and that the term “universal” should be qualified.\(^{136}\) Lord Gardiner stated that Defra was not “satisfied” with the situation, and reiterated that Government “should not rest until we have universal, meaning universal as an opportunity for everyone.”\(^{137}\)

47. The principle of access to a universal minimum broadband service via the Universal Service Obligation (USO) is important. It provides an essential legal platform to ensure universal coverage. We therefore welcome the Government’s commitment to delivering a broadband USO. However, the current specification of the USO demonstrates a lack of ambition for rural areas. The upload speed has been set too low, especially for businesses, and it is likely that the 10Mbps minimum download speed will be obsolete at the time of, or soon after, introduction. We are also concerned that the £3,400 payment threshold means that the USO is not truly “universal” and that ineligible residents will feel misled by the Government’s stated ambitions to ensure that no one is left behind. The Government should commit to an immediate review of the USO specification as soon as possible to ensure it is suitably ambitious for rural areas. The review should determine appropriate upload and download speeds and review the reasonable cost criteria to maximise rural rollout of broadband. The review should be concluded as soon as is practicable to ensure initial roll out of broadband via the USO is not obsolete.

48. The USO is one of several measures to deliver universal broadband coverage. It is important that implementation of the USO does not come at the expense of or replace other rollout initiatives, such as Building Digital UK’s remaining superfast broadband work, the Scottish Government’s R100 programme, and the planned roll out of full-fibre infrastructure. Crossover funding from the USO obligations to the Scottish Government R100 programme needs to be assessed and agreed for premises that are being addressed within the R100 programme but otherwise would be served via the USO. A co-ordinated approach between Government and commercial service providers is essential to ensure residents take up the available services, and do not get trapped with a slower alternative service than is available. The USO must act as a safety net for minimum broadband service delivery, not a ceiling. To protect consumers Ofcom should also set a mandatory requirement that USO provision should not cost more than £45 per month (adjusted for inflation).

**Take up of superfast broadband**

49. The challenges of geography, population density and private sector financial incentives to delivering superfast broadband to rural areas are well recognised. Cost characteristics make provision of broadband infrastructure, particularly in the “last mile” (the final part of the network reaching the consumer, which in rural areas can be several miles), less economic in remote areas.\(^{138}\) 2018 research commissioned by Amazon found that commercial roll out of broadband networks has focussed on urban centres, where economies of scale can be achieved by the network providers.\(^{139}\) Rural areas, where network infrastructure must
stretch over longer distances and where it serves fewer customers, have proved financially challenging. The Government addressed this challenge primarily via BDUK’s Superfast Broadband Programme, which saw approximately £1.7 billion invested in the subsidised roll out of superfast broadband to uncommercial areas. The 2018 NFU broadband and mobile survey presented a positive trend in farmers accessing speeds of 24Mbps over the past four years, and noted that once farmers receive this improved connection “their usage, importance and reliance on the service” increased. BDUK’s target of superfast speeds (of at least 24Mbps) available to 95% of premises has now been met.

50. However, despite increasing access to superfast broadband services, our evidence highlighted the fact that consumers do not always sign up where they are available. According to Ofcom’s last Connected Nations report, although 94% of premises have access to superfast broadband, only 45% of premises have signed up to them. Similarly, 98% of premises have access to a decent broadband service, but only 65% of premises have an active broadband service that delivers a download speed higher than 10Mbps.

51. The CLA commented that the low level of take up for faster broadband suggested “either an unwillingness to adopt new technology or a lack of awareness as to the benefits digital connectivity provides”. The Rural Services Network highlighted some key barriers within rural communities restricting engagement with digital technologies; these included physical access to equipment to enable citizens to get online, and the skills, confidence and motivation (a lack of interest or the failure to see the benefits) to engage online. Openreach stated that the low level of take up reduced their investment case, both for superfast and full-fibre services, and also denied local bodies additional “gainshare” revenue - a share of future revenues from providers to the public sector based on greater than expected adoption of services.

52. The challenges of delivering superfast broadband in rural areas are clear and well recognised. Whilst the Government should be commended for the increase in access to superfast broadband, take up of these services is still below 50 percent. A lack of awareness of the availability of faster broadband services and its benefits is therefore holding back both businesses and communities, particularly in rural areas. The low level of take up is also slowing down the final roll out of superfast broadband, and undermining the investment case for rolling out full-fibre more widely. This is likely to disproportionately affect rural areas where returns are likely to be lower. The Government must continue to work with Ofcom, industry and stakeholders to tackle the issue of low take up of available superfast broadband services, to ensure communities get the benefits and the full value of the public investment in infrastructure is realised. In tackling the issue of low take up, the Government should assess why many rural households do not access available broadband services. There may be particular issues

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140 Amazon, Unlocking the digital potential of rural areas across the UK, p 21
141 Amazon, Unlocking the digital potential of rural areas across the UK (March 2018), p 21; see also Superfast broadband in the UK, Briefing Paper CBP06643, House of Commons Library, 13 November 2018, p 14
142 National Farmers’ Union, Latest NFU broadband & digital member survey (December 2018), last accessed 29 July 2019
143 DCMS, Building Digital UK (May 2019), last accessed 30 August 2019
144 Ofcom, Connected Nations 2018: UK Report (December 2018), p 1
145 Ofcom (RBD00044), p 1
146 CLA (RBD0011), para 16
147 Rural Services Network (RBD0012), para 38
148 Openreach (RBD0049), para 10
affecting rural households, such as additional utility costs (for example, gas and electricity costs) causing affordability issues. It is important that the cost of connection does not become another factor exacerbating the urban-rural digital divide.

53. Delivery of the USO and full-fibre infrastructure should not distract from the delivery of superfast broadband to the final 5 per cent. Setting population targets for coverage is a beneficial way for ensuring as many people as possible are reached. However, such targets can also lead to a feeling of people being left behind in the hardest to reach areas. When setting initial population targets for coverage, Government must have an understanding of how many people and which geographical areas will be left behind and aim to prevent such an outcome.

**Full-fibre roll out**

54. Full-fibre broadband can deliver significantly faster download and upload speeds in excess of 1 Gbps and is also important for supporting 5G. Currently 7.1 per cent of the UK has access to a full-fibre service (see Chapter 1, Figure 1). In July 2018, the Government published its Future Telecoms Infrastructure Review (FTIR), which set out proposals for upgrading the UK’s existing copper network to full-fibre infrastructure. The Government has since announced numerous policy and funding announcements relating to the roll out of full-fibre (See Box 3). The FTIR aims to promote commercial investment by encouraging a competitive market to build fibre infrastructure. The FTIR also proposed an “outside-in” approach to rolling out full-fibre, meaning that rural areas would be given equal priority with urban areas.

**Box 3: Government funding for full-fibre networks**

There are currently three UK-wide Government funded programmes delivering full-fibre networks. The programmes are delivered by BDUK and are grouped under an overarching banner called “the UK Fibre Programme”.

1. **The Local Full-Fibre Networks Programme (LFFN)** aims to stimulate demand for full-fibre networks across the UK. It supports a voucher scheme focussed on small and medium sized businesses and provides grants to local public sector bodies on a competitive basis. The programme includes £287 million investment.

2. **The Rural Gigabit Connectivity Programme (RGCP)** is the first programme providing funding specific to specific rural areas by the “outside-in” approach. It includes a voucher scheme for rural premises as well as a trials scheme to connect public sector buildings such as schools and hospitals in rural areas. £200 million funding has been allocated to the programme, drawn from the National Productivity Investment Fund (NPIF).
(3) The final stages of the superfast broadband programme will prioritise full-fibre connections. Delivery of the programme is led by local bodies in England and the devolved administrations.

Other funding initiatives to support investment in full-fibre include tax breaks for building full-fibre infrastructure and the Digital Infrastructure Fund.\(^{156}\)

55. Most of the major internet service providers and network operators, including Openreach - the predominant infrastructure provider in rural areas, agree that full-fibre cables are the way forward for delivering improved fixed line connectivity.\(^{157}\) DCMS has stated that, whilst the market should be able to provide full-fibre for approximately 90% of UK premises, some remote areas (the remaining 10%) will require additional public support, which will cost between £3–5 billion.\(^{158}\) In March 2019, Ofcom launched a consultation on Promoting competition and investment in fibre networks, which closed on 7 June.\(^{159}\) Ofcom has proposed varying regulation in three different categories of geographic area, depending on the level of potential competition:

- In currently competitive areas, it would not impose regulation;
- In the two thirds of the country where competitive networks can be built, it would impose a level of regulation [to ensure a competitive market emerges];
- In “non-competitive” areas (mainly rural) that are unlikely to be able to support multiple networks, it would support direct public subsidy and impose regulation to allow Openreach to fully recover the costs of installing a fibre network.\(^{160}\)

56. Stakeholders broadly welcomed the direction of the outside-in approach outlined in the FTIR, and proposals to increase Government intervention in non-competitive rural areas. However, they were less optimistic regarding its delivery. The CLA stated that it was “radical and long-sighted” but warned that “it still needs to be implemented and in order for this to be effective, such implementation has to be within an integrated and coherent framework where there is proper co-ordination”.\(^{161}\) ACRE commented that the outside-in approach was “somewhat late in the day” and reserved judgement towards its effectiveness “since details of the approach are only now becoming available.”\(^{162}\) The Countryside Alliance commented that Government’s recent funding announcements initiated by the FTIR were “essential” for closing the digital divide, but noted that Government had only committed funding from the National Productivity Investment Fund (NPIF) until 2021.\(^{163}\) It called for a “clear funding strategy that goes well beyond this 2021 funding commitment”.\(^{164}\) The Rural Services Network said the “proof of the pudding” of the Government’s commitment to the outside in principle would be in the Government’s spending review (assumed at the time to be a multi-year review).\(^{165}\)

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156 Full-fibre networks in the UK, Briefing Paper CBP 8392, House of Commons Library, 15 March 2019, p 27
157 Ofcom, Supporting further investment in full-fibre broadband (July 2018), last accessed 30 July 2019
158 Department for Digital, Culture, Media and Sport (RBD0046), para 19
159 Ofcom, Consultation: Promoting competition and investment in fibre networks – Initial proposals – Approach to remedies (June 2019), last accessed 29 August 2019
160 Ofcom, Promoting competition and investment in fibre networks Initial proposals – Approach to remedies (March 2019), p 2
161 CLA (RBD0011), para 23
162 Action with Communities in Rural England (RBD0019), para 10
163 Countryside Alliance (RBD0043), para 3
164 Countryside Alliance (RBD0043), para 3
165 Rural Services Network (RBD0012), para 25
57. It was also suggested that some full-fibre upgrades could be funded by existing money which could be retrieved from commercial providers, such as BT. Malcolm Corbett, Chair of the Independent Networks Cooperative Association (INCA), told us that “quite a lot of the money for the outside-in process” could be found “from money that is already in the system from BDUK”, noting that by some calculations, there were “some hundreds of millions of pounds of underspend sitting in BT’s accounts as capital deferral”. Mike Kiely, The Bit Commons, accused BT of “accounting treatment” which had aided “cost recovery but not network build in rural areas”. Mr Paolo Gerli and Professor Jason Whalley stated their research into BDUK had found a “lack of transparency” regarding the management of the clawback (i.e. money from public investment sitting in the accounts of commercial service providers). More broadly, they argued that the inconsistent management of the clawback across local projects highlighted “the need for a nationwide integrated approach” and “to ensure an efficient usage of public subsidies.”

58. Ensuring rural areas have equal priority as urban areas is an important principle which we fully support. The Government appears to have learnt its lesson with the proposed outside-in approach in the Future Telecoms Infrastructure Review (FTIR). However, we remain cautious about how the outside-in approach will be delivered in practice and await further funding and policy announcements. The proof of the Government’s commitment to the principle will be in the next multi-year spending review. Delivering full-fibre on time and cost-effectively will require a nationwide integrated approach and DCMS must learn the lessons from mistakes made in previous roll-out projects. The Government must ensure that there is efficient use of public subsidy and that any existing money sitting in the accounts of commercial service providers is used to fund infrastructure upgrades. The Government must also commit appropriate levels of funding across the life-time of the programme in the next spending review to ensure delivery of the ambitions outlined in the FTIR.

59. The UK Government should also consider additional opportunities to prioritise funding for rural mobile coverage and broadband rollout. The sale of 3G licences in 2000 raise £22.5 billion, which could have been used to prioritise rural areas. The sale of 4G licences in 2013 only raised £2.3 billion but this still could have a substantial rural contribution. Future licencing sales and income streams should be considered as a means to target non-commercially viable roll out of mobile and broadband connectivity.

**Barriers to full-fibre roll out**

60. In addition to issues with market regulation and competition, high deployment costs and other regulatory barriers make full-fibre rollout very difficult to do. Openreach stated that it “is committed to delivering a transformational upgrade to UK digital connectivity” with its own ambition to reach 15 million premises with full-fibre by the mid-2020s but stated that this relied on “having the policy and regulatory enablers in place.” DCMS has launched a “Barrier Busting Task Force” with the objective of removing barriers to the deployment of full-fibre and 5G, and had recently published the Digital Connectivity

166 Q55  
167 The Bit Commons (RBD0002), Annex A  
168 Mr Paolo Gerli (RBD0034), para 11  
169 Mr Paolo Gerli (RBD0034), para 11  
170 Openreach (RBD0049), para 7
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Portal providing guidance and case studies on deployment in local areas.\(^{171}\) DCMS has also launched numerous consultations, including on tenant access to full-fibre and on new build developments.\(^{172}\) However, Openreach highlighted that these had not progressed beyond consultation stage and delay of the outcomes was “holding back” full-fibre build.\(^{173}\)

Wayleaves

61. A specific regulatory barrier that was identified for the roll out of full-fibre was existing legislation around wayleaves.\(^{174}\) A wayleave is a form of access agreement whereby a landowner grants a communications provider a licence to install, access and maintain equipment on their land.\(^{175}\) The Government has consulted on proposals addressing access to buildings to connect tenants requesting a service when faced with an unresponsive landlord.\(^{176}\) The Internet Service Providers’ Association (ISPA), whilst welcoming the proposed reforms as a key driver to accelerating rollout in multi-dwelling units, suggested that in their current form, they were more likely to impact urban and more densely populated areas than rural areas.\(^{177}\) It stressed the impact broader legislation could have if used to help internet service providers build across third party land in rural areas to reach more isolated properties.\(^{178}\) ISPA argued that currently absentee freeholders forced network builders “to make suboptimal decisions”, for example rerouting a network across roads to avoid going via a third-party property, leading to “greater disruption of the local community, further uncertainty for those expecting connections, and increased costs for the operator”.\(^{179}\) Similar calls for wayleave reform were made by Openreach and the Independent Networks Cooperative Association.\(^{180}\) The CLA identified the same issues with the engagement process between infrastructure providers and landowners, stating that “breakdowns in communication” were often the cause of delayed projects.\(^{181}\)

Full-Fibre to new builds

62. The Local Government Association said it was increasingly apparent that the standard of digital connectivity provided to rural and remotely rural new build homes was “below par”.\(^{182}\) Of those new built premises built in rural areas in the last three years only one in four had full-fibre connectivity, with one in ten still not able to achieve the USO minimum speed.\(^{183}\) It stated that the current legislative and policy framework barred councils from ensuring that all new build developments came with full-fibre.\(^{184}\) Openreach have also suggested it was a “market failure” if new premises were delivered without full-fibre.\(^{185}\) Although Openreach install full-fibre to all new premises for free if the development is

\(^{171}\) Department for Digital, Culture, Media and Sport (RBD0046), para 10
\(^{172}\) DCMS, Ensuring tenants’ access to gigabit-capable connections, last accessed 31 July 2019; DCMS, New Build Developments; Delivering gigabit-capable connections, last accessed 31 July 2019
\(^{173}\) Openreach (RBD0049), para 9
\(^{174}\) Internet Services Providers Association (RBD0037), para 2.3
\(^{175}\) DCMS, Guidance on access agreements (December 2018), last accessed 8 September 2019
\(^{176}\) DCMS, Ensuring tenants’ access to gigabit capable connections (October 2018)
\(^{177}\) Internet Services Providers Association (RBD0037), para 4.2
\(^{178}\) Internet Services Providers Association (RBD0037), para 4.4
\(^{179}\) Internet Services Providers Association (RBD0037), para 4.5
\(^{180}\) Openreach (RBD0049), para 13; Independent Networks Co-operative Association (RBD0035), Para 2.4
\(^{181}\) CLA (RBD0011), para 5
\(^{182}\) Local Government Association (LGA) (RBD0010), para 3.4
\(^{183}\) Local Government Association (LGA) (RBD0010), para 3.5
\(^{184}\) Local Government Association (LGA) (RBD0010), para 3.7
\(^{185}\) Openreach (RBD0049), para 41
above 30 premises, many smaller sites continue to be delivered with copper connections.\textsuperscript{186} They recommended that "mandating fibre in all new builds is the only route to prevent a new digital divide".\textsuperscript{187} DCMS has consulted on improving infrastructure providers’ ability to access multi-dwelling units and mandating full-fibre in new builds, but according to Openreach “little progress” has been made in moving these proposals forwards since the consultations closed in December 2018.\textsuperscript{188} Margot James MP told us that DCMS had bid for legislation to address barriers in the next session, including mandating full-fibre to new some builds.\textsuperscript{189}

63. **Whilst the Committee supports the Government’s existing barrier busting efforts, more needs to be done to ensure the right policy and legislative framework exists to prevent a deepening of the digital divide. Reform of current wayleave arrangements and delivery of full-fibre connections in new builds is essential to ensure an accelerated full-fibre roll out. It will require legislative change and a balancing of numerous competing interests, so is likely to take time. **The Government should release the outcomes of its consultations, including on ensuring tenants’ access to gigabit-capable connections and new build developments, and announce how it intends to bring forward required legislation as soon as possible.

**Government targets for full-fibre**

64. As of July 2019, according to the then Culture Secretary Rt Hon Jeremy Wright MP, 8 per cent of UK premises had access to a full-fibre connection (roughly 2 million premises).\textsuperscript{190} In the FTIR, the Government set targets for full-fibre roll out, with 15 million UK premises (approximately 50 per cent) connected by 2025, and all premises to have access to a full-fibre service by 2033.\textsuperscript{191} DCMS has stated that the plan to have nationwide full-fibre services by 2033 is "ambitious" and will require "deployment of new digital infrastructure at scale and at pace".\textsuperscript{192} The targets are broadly in line with recommendations made by the National Infrastructure Commission (NIC), an executive agency of HM Treasury that provides impartial, expert advice on major long term infrastructure challenges.\textsuperscript{193} In its last National Infrastructure Assessment, the NIC stated that delivering a new national full-fibre infrastructure network “will take at least a decade”, and that if the UK wanted to avoid the risk of not having the infrastructure to meet increasing consumer demand for data it would need “to start investing soon”.\textsuperscript{194}

65. Mark Bridgeman, Vice President of the CLA, told us that 2033 target was so far away that it would be hard to hold Government to account, and suggested interim targets for roll out should be set.\textsuperscript{195} Graham Biggs, CEO of the Rural Services Network expressed

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\textsuperscript{186} Openreach (RBD0049), para 41–42  \\
\textsuperscript{187} Openreach (RBD0049), para 45  \\
\textsuperscript{188} Openreach (RBD0049), para 37  \\
\textsuperscript{189} Qq 157–158  \\
\textsuperscript{190} HC Deb, 22 July 2019, col 1139 [Commons Chamber]  \\
\textsuperscript{191} DCMS, Future Telecoms Infrastructure Review (July 2018), p 3  \\
\textsuperscript{192} Department for Digital, Culture, Media and Sport (RBD0046), para 7  \\
\textsuperscript{193} Full-fibre networks in the UK, Briefing Paper CSP 8392, House of Commons Library, 15 March 2019, p 3  \\
\textsuperscript{194} National Infrastructure Commission, National Infrastructure Assessment (July 2018), p 20 and p 23  \\
\textsuperscript{195} O23
\end{flushleft}
that 2033 was not “ambitious at all in reality” given the available technological solutions, and that Government needed to “find the resource or take further regulatory powers, or a mixture of those things” to ensure it was achieved sooner.196

66. During our inquiry, both final candidates in the Conservative leadership election promised to speed up the delivery of broadband to rural areas, with the eventual winner the Rt Hon Boris Johnson MP promising nationwide full-fibre by 2025.197 In response to these commitments, the then Digital Minister Margot James MP told us that “to have the whole country connected to full-fibre by 2025 is not physically possible”.198 In his first statement as Prime Minister, Mr Johnson reiterated his pledge that the Government would “accelerate the programme of full-fibre broadband by eight years, so that every household in this country gets full-fibre broadband within the next five years.”199 The Government has yet to publish details as to how this will be achieved, and the issues identified by the former Minister and the NIC addressed.

67. The target of 2033 for universal full-fibre roll out lacks urgency and ambition for rural areas. The Committee, therefore, welcomes the ambition underpinning the new Prime Minister’s commitment to achieve universal full-fibre broadband by 2025. However, given previous assessments of the time necessary to achieve universal full-fibre, including by the independent National Infrastructure Commission, we are sceptical that this target will be achieved without substantial new, long-term, public investment and potentially controversial regulatory reforms. Given the relative immediacy of the new target date of 2025, the Government must release a statement as soon as possible to explain how it intends to meet it. In accelerating its targets for full-fibre roll out, the Government must honour its commitment to its “outside-in” approach to ensure hard to reach rural are prioritised.

196 Q24
197 Yorkshire Post, Tory rivals Boris Johnson and Jeremy Hunt promise to deliver superfast full fibre broadband years ahead of schedule 3 July 2019
198 Q166
199 HC Deb, 25 July 2019, col 1486 [Commons Chamber]
5 Mobile data services

Box 4: Summary of key terms

**Mobile Network Operators (MNOs)**

Improving coverage of mobile data services requires **mobile base stations (masts)** to be built. The roll-out of mobile services and infrastructure is led by private **Mobile Network Operators (MNOs)**, who take commercial decisions about where to build masts and deliver services.

There are four MNOs in the UK: EE, Vodafone, Three and O2. These MNOs deliver mobile services via their own physical network of mobile base stations. Several small providers rent space on one of the MNO’s networks to deliver services to consumers.

**Coverage obligations**

The Government has committed to extend geographic mobile coverage to 95 per cent of the UK by the end of 2022. Since 2016, UK Government policy for improving mobile coverage has focused on coverage obligations for operators and reforms making it easier to build mobile infrastructure.

**Coverage obligations** are legal requirements on mobile operators to provide a minimum level of mobile coverage across a geographic area or certain number of premises. Ofcom imposes coverage obligations via licences for different bands of airwaves (spectrum). Ofcom is consulting on proposals for new coverage obligations on licences for a new band of spectrum set to be auctioned - the 700 megahertz (MHz) band. Due to its specific qualities, this band is currently a key part of the Government and Ofcom’s proposals to improve mobile coverage in rural areas.

Source: House of Commons Library and Ofcom

68. According to the trade body Mobile UK, in 2019 mobile data is now regarded by many as an essential service. With many people using mobile data instead of fixed line telephone and broadband services, access to mobile data services is increasingly important. Given this trend, according to the Local Government Association, mobile data consumption is set to increase sevenfold by 2021. In particular, rural businesses stand set to benefit from improved mobile data services, with the Government in 2017 outlining that the rollout of 4G had delivered more than £75 billion in GDP to the UK economy through innovation and productivity. There are two main issues with coverage of mobile data in rural areas in the UK:

a) “Not-spots” - areas where there is currently no mobile coverage; and

b) “Partial not-spots” - areas that have coverage from some but not all four of the Mobile Network Operators (MNOs).

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200 Mobile coverage in the UK, Briefing Paper CBP 7069, House of Commons Library, 22 February 2019; see also Ofcom, Improving mobile coverage: Proposals for coverage obligations in the award of the 700 MHz spectrum band, (May 2018), last accessed 6 September 2019
201 Mobile UK (RBD0041), para 14
202 Local Government Association (LGA) (RBD0010), para 3.9
203 Local Government Association (LGA) (RBD0010), para 3.9
204 DCMS, Next Generation Mobile Technologies: A 5G Strategy for the UK (March 2017), p 19
This chapter examines two issues relating to mobile coverage and the problems with it: first, the accuracy of coverage statistics; and second, the proposals from Ofcom and MNOs for improving national coverage.

**Accuracy of mobile coverage statistics**

69. In response to complaints from numerous councils and rural stakeholders that mobile coverage statistics provided by MNOs were inaccurate (see Chapter 2), Ofcom outlined its methodology to us, explaining that it published data from the four MNOs, each using its own model to give a predicted signal strength across the whole UK.\(^{205}\) Katie Pettifer, Public Policy Director, Ofcom explained that Ofcom quality assured each of the MNOs’ models, as well as conducted its own physical testing to quality assure the data it gets.\(^{206}\)

70. The Local Government Association (LGA) criticised Ofcom’s methodology stating that “metrics should be measurable and based on the reality of service and coverage provided to customers, not based on simulated or predicted performance”.\(^{207}\) The LGA also claimed there was an imbalance in the resource intensive work Ofcom had undertaken to test urban coverage compared to its efforts in rural areas.\(^{208}\) Shropshire Council recommended that a proportion of the licence funding paid by MNOs should contribute towards a “testing taskforce” which should be “solely focused on detailed and periodic verification of MNO coverage claims in each geography.”\(^{209}\) In its Statement of Strategic Priorities (SSP), which Ofcom legally must have regard to, DCMS have called on Ofcom to improve the quality and availability of address-level broadband and mobile coverage data.\(^{210}\)

71. Despite improvements in national statistics for mobile coverage, stakeholder surveys continue to report that actual coverage varies from patchy coverage to complete lack of coverage in rural areas. We welcome the obligation in the Statement of Strategic Priorities that Ofcom must improve the quality and availability of its coverage statistics. Without accurate and detailed local data, it is easy for national policy makers to ignore the specific needs of consumers in rural areas. Ofcom should report coverage at a lower spatial level and include local 4G coverage targets in addition to national targets. Ofcom should also periodically test providers’ datasets against rural consumers actual experience, rather than relying upon simulated or predicted performance.

**Improving mobile coverage**

72. In the Future Telecoms Infrastructure Review the Government set a target for 4G to reach 95 per cent geographic coverage of the UK by 2022.\(^{211}\) Ofcom told us this ambition could not be achieved solely through regulation.\(^{212}\) Ofcom’s primary regulatory tool is the inclusion of coverage obligations in its auctions of spectrum bands for mobile services, for
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example its upcoming auctions of the 700MHz band and the 3.6–3.8GHz band. Ofcom however explained that the level at which obligations are set is constrained by mobile operators’ willingness to purchase them. Beyond its spectrum auctions, Ofcom advised Government in 2018 that a combination of other policies would be required to deliver near universal coverage including public subsidy for roll out, mandating rural wholesale access (known as “roaming”), and increased infrastructure sharing.

**Ofcom’s 700 MHz Spectrum Auction**

73. Ofcom’s initial proposal for its coverage obligation in its 700 MHz auction was 92 per cent geographic coverage of 4G but this was later reduced to 90 per cent. The LGA criticised Ofcom’s decision, and further argued that there was “no clear guarantee on how progress to reach these goals will be monitored”. Which? commented that Ofcom had been “overly cautious in its approach” to coverage obligations “with only secondary regard given to the consumer perspective”. In its Statement of Strategic Priorities, the Government has stated that the 700 MHz auction presents an important opportunity for improving mobile coverage “particularly in rural areas and on the UK’s major roads” and that this “should, if necessary, be the key priority in the conduct of that auction”.

74. Katie Pettifer, Public Policy Director, Ofcom, explained to us that the initial 92 per cent target was very ambitious and that the decision to reduce the obligation to 90 per cent was made after operators provided more detailed information on the entailed costs. She explained more broadly that Ofcom had “pushed up the boundaries” of the obligations as far as they could in line with its legal duties, and suggested that this approach had helped to prompt the voluntary proposal from the MNOs on infrastructure sharing (see the “Shared Rural Network” proposal below).

75. Shropshire Council commented that the auction did not include any targets for indoor coverage, despite Ofcom data showing that poor coverage inside buildings was a particular rural issue. It argued that “users should not have to step outside every time they want to use their phone, either for a phone call or the internet.” Katie Pettifer, Ofcom, explained the decision to not include indoor targets, stating that the focus of the coverage auction was to focus on “bringing good outdoor 4G coverage to 140,000 premises that do not currently have it”, which in turn would improve indoor coverage due to additional signal strength. Ofcom should set targets for both outdoor and indoor coverage. People living in rural areas shouldn’t have to step outside every time they want to use their phone, either for a phone call or the internet. Ofcom should include indoor coverage targets when setting coverage obligations.

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213 Ofcom, *Consultation: Award of the 700 MHz and 3.6–3.8 GHz spectrum bands* (March 2019), para 1.2; Ofcom, *Improving mobile coverage* (March 2019), para 1.7–1.8
214 Ofcom (RBD0051), para 3
216 Local Government Association (LGA) (RBD0010), para 4.4
217 Which? (RBD0029), para 11
218 DCMS, *Statement of Strategic Priorities for telecommunications, the management of radio spectrum, and postal services* (July 2019), para 30
219 Q207
220 Q209
221 Shropshire Council (RBD0040), para 3.10
222 Shropshire Council (RBD0040), para 3.10
223 Q210
The “Shared Rural Network” (SRN) proposal

76. In response to coverage obligations included within Ofcom’s 700MHz spectrum auction, the four MNOs have recently come together to propose a partnership with Government to tackle the issue of poor coverage in rural areas. Mobile UK, their trade body, stated that their proposal - called the “Shared Rural Network” (SRN) - goes “beyond what Ofcom is proposing for the 700MHz auction” and does so at less cost to the public purse.224 The proposal suggests “enhanced mast sharing” to eliminate the issue of partial not spots and bring coverage from all four operators up to 88 per cent (currently 67 per cent).225 It also calls for Government support to bring commercial services to the Home Office’s Extended Area Service (292 mast sites being built as part of the Emergency Services Network being built by the Home Office to provide coverage for the emergency services).226

77. To address “not spots” the proposal also calls for government support to build additional network, “prioritising where there is community led demand”, to bring coverage up to 95 per cent of the UK landmass from at least one operator.227 Mobile UK has said that the proposal requires measures from government, including reform of permitted development rights, business rates relief, and easier access to public assets under the recently reformed Electronic Communications Code (ECC).228

78. Mark Bridgeman, Vice President, CLA, told us that he commended the idea of the SRN but stressed that the arrangement would need to be “legally binding”.229 The CLA published a letter, with co signatories from the Rural Services Network, National Farmers’ Union, Countryside Alliance and Which?, agreeing in principle to the proposal, but stating their support was subject to:

- Legal guarantees on all operators that targets will be met;
- Coverage improvements delivered over a shorter timeframe;
- Clear monitoring arrangements by Ofcom, with enforcement action if targets are not met; and
- A requirement on the operators to publish a rollout plan.230

Rural roaming

79. There was a lot of support from rural stakeholders for mandating a “rural roaming” solution to improve coverage in rural areas.231 MNOs would be required to allow customers of another operator to “roam” onto their network in areas where the customer’s provider did not have coverage, in a similar way to how customers roam onto local networks when...
abroad. This differs from the SRN proposal in that, rather than MNOs sharing physical infrastructure such as masts to provide coverage from multiple networks in an area, individual MNOs would be required, for a fee, to provide a service to their competitors’ customers through their own infrastructure.

80. The CLA noted that Ofcom’s September 2018 advice to Government stated that coverage could be improved by 10 per cent within 12 months if rural roaming was introduced. More broadly, it argued that rural consumers had been told for too long to just “wait and see” with the unfulfilled promise that coverage would be improved. They argued that “giving too much flexibility to mobile network operators by removing rural roaming” would “take away the level of urgency that is required to solve the 4G coverage crisis”. The Rural Services Network agreed that “network providers would be more incentivised to improve their rural coverage if they knew that failure to do so may result in roaming being imposed at some future date”.

81. Hamish MacLeod, Mobile UK, outlined to us the operators’ resistance to roaming, arguing that “by mandating national roaming you could create a situation where you actually incentivise a reduction in investment”. He stressed that coverage was a key selling point for MNOs and that rural roaming removed the potential for competition, reducing the incentive for investment. Mobile UK further asserted that a roaming solution did not have the full support of industry, whereas the SRN proposal did, meaning it had “the greatest chance of success.” BT argued that roaming would “not be an effective solution to delivering a high-quality experience for customers”, stating that it would not address total not spots and would “significantly dilute the incentive for operators to invest in extending coverage”. BT further argued it would degrade the customer experience with increased dropped or blocked calls, less reliable access to data, poorer service and decreased battery life.

82. Ofcom told us that it believed the SRN proposal was a “potentially very positive development” and informed us that they were providing technical support and input into the discussions between the operators and Government. On roaming, Ofcom concluded in advice to the Government published last year that roaming introduced investment risks and consumer experience issues, but that these could be mitigated to a degree. It also concluded that the most effective way to introduce a roaming arrangement was with the cooperation of the MNOs. Ofcom said it would continue to keep the question of rural roaming under review, but that it had no plans to conduct a specific review given the advice to Government last year and the ongoing SRN discussions. DCMS stated that the terms of the SRN proposal were still being developed, and that it looked forward to
hearing the industry’s potential solution.\textsuperscript{245} In its Statement of Strategic Priorities, DCMS have stated that “Ofcom should consider the costs and benefits of [roaming in rural areas] and maintain the option of requiring roaming by including appropriate provisions when granting rights of use for spectrum”.\textsuperscript{246}

83. Rural communities have been told for too long to just wait and see with the unfulfilled promise that mobile coverage will be improved. On the eve of the roll out of 5G, rural communities will only feel more marginalised if they continue to be denied access to 4G, or even 3G. With many now regarding mobile data as an essential service, the Government and Ofcom has to be ambitious in setting coverage targets and obligations.

84. Relying on competition between the Mobile Network Operators to tackle not spots and partial not spots in coverage has not worked. The Committee therefore supports a rural roaming solution to tackling poor mobile coverage in rural areas if the industry cannot find a comparable or better solution quickly. We await the detail of the Shared Rural Network proposal with interest, as we recognise it could have significant benefits for rural communities. Any arrangement must include legal guarantees on Mobile Network Operators (MNOs) to ensure they meet coverage targets. Parallel to the talks over the Shared Rural Network, Ofcom should urgently conduct a specific review on the costs and benefits of roaming. Should a voluntary agreement between Government and MNOs not be reached by the end of 2019, the Government should instruct Ofcom to impose a rural roaming solution to tackle partial “not-spots”.

\textsuperscript{245} Department for Digital, Culture, Media and Sport (RBD0046), para 13
\textsuperscript{246} DCMS, Statement of Strategic Priorities for telecommunications, the management of radio spectrum, and postal services (July 2019), para 31
Conclusions and recommendations

Rural coverage and the urban rural digital divide

1. There are a number of different technological solutions to provide connectivity to rural areas. There is in addition a confusing array of overlapping definitions, for example the different definitions of speeds accessible to consumers. To minimise confusion, where possible the Government, Ofcom and the devolved administrations should align their definitions. For example, the Government should adopt the definition of superfast broadband as 30 Mbps. (Paragraph 14)

2. Despite coverage improvements since our predecessor Committee’s inquiry in 2015, there are still clear disparities in broadband and mobile coverage between urban and rural areas, and between rural villages and sparser rural settlements. These divides are the cause of much frustration. The amount of data being used each year is increasing dramatically as people become gradually more reliant on good connection and fast speeds to engage in society. Poor coverage, exacerbated by the urban rural digital divide, is therefore increasingly impacting upon the quality of life in rural areas. This is worsened by the need to access services online; the Government going increasingly digital and rural agricultural payments requiring to be applied for online. (Paragraph 15)

3. Further frustration is caused by the unreliability of broadband connections, especially where the actual speed experienced is slower than the maximum download speed advertised. We therefore support the work Ofcom has done with the Advertising Standards Agency to ensure advertised speeds accurately reflect the consumer experience. Ofcom should continue to refine how broadband speeds are measured and advertised to the consumer, so that consumers are fully aware of the speeds they can get. In response to this Report, Ofcom should update us on whether the changes they have made so far have improved the consumer experience, particularly in rural areas where there are still long copper wire connections. (Paragraph 16)

4. Government acknowledges digital connectivity as a utility service. Rural communities therefore both need and deserve to have the same level of coverage as that experienced in urban areas, so they can run productive businesses and enjoy family life. The Government must continually invest in rural areas to reduce the disparities in digital connectivity between urban and rural areas, and between rural villages and sparser rural settlements. Previous interventions have, at best, kept the gap stable. The roll-out of new technologies such as full-fibre and 5G mobile data represent an opportunity for a step change, but also a risk that rural areas are left further behind. Therefore, in addition to national coverage targets, the Government should set specific targets for reducing the urban rural divide and put in place the investment to achieve them. (Paragraph 17)

5. Rural businesses are suffering considerably due to poor digital connectivity. Whilst we welcome the Government’s commitment to fixing the problem, the fact it has not collected specific information regarding the number of affected businesses, and the wider cost to the rural economy, as a precursor to designing effective policy, calls into question the priority it places on it. The Government should further increase its
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available funding for rural broadband projects, for example through DEFRA’s Rural Development Programme for England. Allocation of funding to the devolved nations should be needs based rather than Barnett allocations; for example, Scotland requires coverage to be provided to the west coast islands as well as Orkney and Shetland in the north, providing additional remote rural challenges. There should be greater transparency on how the UK Government estimates costs for its broadband programme and allocates funding across the UK. The Government should also conduct research into the impact poor connectivity is having on businesses in the rural economy, and the wider impact this is having on the national economy to underpin the case for longer-term action. (Paragraph 20)

Digital public services in rural areas

6. In theory, digital public services could particularly benefit people in rural areas who live further away from physical services. However, continuing to deliver a “digital-by default” strategy for public services, before solving the issue of connectivity in rural areas, has the potential to worsen the impact of the digital divide. Many people living in rural areas are struggling to access basic services due to poor connectivity and the increasing difficulty of accessing these services offline. Local councils and other local service providers are potentially being driven to develop cheaper digital services, further penalising rural communities due to a lack of consideration from central government towards the realities of poor connectivity. If digital connectivity is truly considered a utility, rural communities should not be denied it. Given the continued shift towards increasingly digital public services, the Government must prioritise delivering improved connectivity for people, primarily in rural areas, with no access to adequate broadband or reliable mobile signal. In the interim poor connectivity should be taken into account in the assumptions Government departments and the Treasury make on the savings possible via digital service transformation when allocating funds for local services. (Paragraph 30)

7. It is unclear whether there is any level consideration of rural needs across central Government in the design of digital public services platforms and policies. There should be requirements across Government to take account of connection speeds available in rural areas in the process of designing or updating digital public service platforms. In their response to this Report the Government should outline what work is currently done to ensure this. Any new digital public service platforms should also be trialled and assessed by rural stakeholders prior to roll out to ensure they are user friendly. (Paragraph 31)

8. The business case for public investment in rural connectivity is strengthened when account is taken of the additional costs in delivery of services to significant numbers of people in rural areas who are unable to access those services digitally. The Government should therefore collect, publish, and build this data into future investment decisions. (Paragraph 32)
Broadband

9. The principle of access to a universal minimum broadband service via the Universal Service Obligation (USO) is important. It provides an essential legal platform to ensure universal coverage. We therefore welcome the Government’s commitment to delivering a broadband USO. However, the current specification of the USO demonstrates a lack of ambition for rural areas. The upload speed has been set too low, especially for businesses, and it is likely that the 10Mbps minimum download speed will be obsolete at the time of, or soon after, introduction. We are also concerned that the £3,400 payment threshold means that the USO is not truly “universal” and that ineligible residents will feel misled by the Government’s stated ambitions to ensure that no one is left behind. The Government should commit to an immediate review of the USO specification as soon as possible to ensure it is suitably ambitious for rural areas. The review should determine appropriate upload and download speeds and review the reasonable cost criteria to maximise rural rollout of broadband. The review should be concluded as soon as is practicable to ensure initial roll out of broadband via the USO is not obsolete. (Paragraph 47)

10. The USO is one of several measures to deliver universal broadband coverage. It is important that implementation of the USO does not come at the expense of or replace other rollout initiatives, such as Building Digital UK’s remaining superfast broadband work, the Scottish Government’s R100 programme, and the planned roll out of full-fibre infrastructure. Crossover funding from the USO obligations to the Scottish Government R100 programme needs to be assessed and agreed for premises that are being addressed within the R100 programme but otherwise would be served via the USO. A co-ordinated approach between Government and commercial service providers is essential to ensure residents take up the available services, and do not get trapped with a slower alternative service than is available. The USO must act as a safety net for minimum broadband service delivery, not a ceiling. To protect consumers Ofcom should also set a mandatory requirement that USO provision should not cost more than £45 per month (adjusted for inflation). (Paragraph 48)

11. The challenges of delivering superfast broadband in rural areas are clear and well recognised. Whilst the Government should be commended for the increase in access to superfast broadband, take up of these services is still below 50 percent. A lack of awareness of the availability of faster broadband services and its benefits is therefore holding back both businesses and communities, particularly in rural areas. The low level of take up is also slowing down the final roll out of superfast broadband, and undermining the investment case for rolling out full-fibre more widely. This is likely to disproportionately affect rural areas where returns are likely to be lower. The Government must continue to work with Ofcom, industry and stakeholders to tackle the issue of low take up of available superfast broadband services, to ensure communities get the benefits and the full value of the public investment in infrastructure is realised. In tackling the issue of low take up, the Government should assess why many rural households do not access available broadband services. There may be particular issues affecting rural households, such as additional utility costs (for example, gas and electricity costs) causing affordability issues. It is important that the cost of connection does not become another factor exacerbating the urban rural digital divide. (Paragraph 52)
12. Delivery of the USO and full-fibre infrastructure should not distract from the delivery of superfast broadband to the final 5 per cent. Setting population targets for coverage is a beneficial way for ensuring as many people as possible are reached. However, such targets can also lead to a feeling of people being left behind in the hardest to reach areas. When setting initial population targets for coverage, Government must have an understanding of how many people and which geographical areas will be left behind and aim to prevent such an outcome. (Paragraph 53)

13. Ensuring rural areas have equal priority as urban areas is an important principle which we fully support. The Government appears to have learnt its lesson with the proposed outside-in approach in the Future Telecoms Infrastructure Review (FTIR). However, we remain cautious about how the outside-in approach will be delivered in practice and await further funding and policy announcements. The proof of the Government’s commitment to the principle will be in the next multi-year spending review. Delivering full-fibre on time and cost-effectively will require a nationwide integrated approach and DCMS must learn the lessons from mistakes made in previous roll-out projects. The Government must ensure that there is efficient use of public subsidy and that any existing money sitting in the accounts of commercial service providers is used to fund infrastructure upgrades. The Government must also commit appropriate levels of funding across the life-time of the programme in the next spending review to ensure delivery of the ambitions outlined in the FTIR. (Paragraph 58)

14. The UK Government should also consider additional opportunities to prioritise funding for rural mobile coverage and broadband rollout. The sale of 3G licences in 2000 raise £22.5 billion, which could have been used to prioritise rural areas. The sale of 4G licences in 2013 only raised £2.3 billion but this still could have a substantial rural contribution. Future licencing sales and income streams should be considered as a means to target non-commercially viable roll out of mobile and broadband connectivity. (Paragraph 59)

15. Whilst the Committee supports the Government’s existing barrier busting efforts, more needs to be done to ensure the right policy and legislative framework exists to prevent a deepening of the digital divide. Reform of current wayleave arrangements and delivery of full-fibre connections in new builds is essential to ensure an accelerated full-fibre roll out. It will require legislative change and a balancing of numerous competing interests, so is likely to take time. The Government should release the outcomes of its consultations, including on ensuring tenants’ access to gigabit-capable connections and new build developments, and announce how it intends to bring forward required legislation as soon as possible. (Paragraph 63)

16. The target of 2033 for universal full-fibre roll out lacks urgency and ambition for rural areas. The Committee, therefore, welcomes the ambition underpinning the new Prime Minister’s commitment to achieve universal full-fibre broadband by 2025. However, given previous assessments of the time necessary to achieve universal full-fibre, including by the independent National Infrastructure Commission, we are sceptical that this target will be achieved without substantial new, long-term, public investment and potentially controversial regulatory reforms. Given the relative immediacy of the new target date of 2025, the Government must release a statement
as soon as possible to explain how it intends to meet it. In accelerating its targets for full-fibre roll out, the Government must honour its commitment to its “outside-in” approach to ensure hard to reach rural are prioritised. (Paragraph 67)

Mobile data services

17. Despite improvements in national statistics for mobile coverage, stakeholder surveys continue to report that actual coverage varies from patchy coverage to complete lack of coverage in rural areas. We welcome the obligation in the Statement of Strategic Priorities that Ofcom must improve the quality and availability of its coverage statistics. Without accurate and detailed local data, it is easy for national policy makers to ignore the specific needs of consumers in rural areas. Ofcom should report coverage at a lower spatial level and include local 4G coverage targets in addition to national targets. Ofcom should also periodically test providers’ datasets against rural consumers actual experience, rather than relying upon simulated or predicted performance. (Paragraph 71)

18. Ofcom should set targets for both outdoor and indoor coverage. People living in rural areas shouldn't have to step outside every time they want to use their phone, either for a phone call or the internet. Ofcom should include indoor coverage targets when setting coverage obligations. (Paragraph 75)

19. Rural communities have been told for too long to just wait and see with the unfulfilled promise that mobile coverage will be improved. On the eve of the roll out of 5G, rural communities will only feel more marginalised if they continue to be denied access to 4G, or even 3G. With many now regarding mobile data as an essential service, the Government and Ofcom has to be ambitious in setting coverage targets and obligations. (Paragraph 83)

20. Relying on competition between the Mobile Network Operators to tackle not spots and partial not spots in coverage has not worked. The Committee therefore supports a rural roaming solution to tackling poor mobile coverage in rural areas if the industry cannot find a comparable or better solution quickly. We await the detail of the Shared Rural Network proposal with interest, as we recognise it could have significant benefits for rural communities. Any arrangement must include legal guarantees on Mobile Network Operators (MNOs) to ensure they meet coverage targets. Any arrangement must include legal guarantees on Mobile Network Operators (MNOs) to ensure they meet coverage targets. Parallel to the talks over the Shared Rural Network, Ofcom should urgently conduct a specific review on the costs and benefits of roaming. Should a voluntary agreement between Government and MNOs not be reached by the end of 2019, the Government should instruct Ofcom to impose a rural roaming solution to tackle partial “not-spots”. (Paragraph 84)
Annex: Coverage data

The tables and charts below outline the urban rural divide using Ofcom’s most recent coverage data.247 These are not directly comparable because different statistical classifications of rural and urban areas are used in England and Wales, Scotland and Northern Ireland respectively.248

Broadband coverage data

Rural/urban breakdown of broadband connectivity by download speeds:

### England & Wales: rural & urban broadband connectivity, January 2019

<table>
<thead>
<tr>
<th>Urban-rural classification</th>
<th>Premises below Universal Service Obligation</th>
<th>Premises able to receive 10 Mbps</th>
<th>Premises able to receive 30 Mbps</th>
<th>Premises able to receive 300 Mbps</th>
<th>Total number of premises</th>
</tr>
</thead>
<tbody>
<tr>
<td>RURAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural town &amp; fringe (sparse setting)</td>
<td>6.6%</td>
<td>93.8%</td>
<td>96.3%</td>
<td>15.3%</td>
<td>4,989,331</td>
</tr>
<tr>
<td>Rural town &amp; fringe</td>
<td>0.4%</td>
<td>93.9%</td>
<td>96.1%</td>
<td>6.0%</td>
<td>171,602</td>
</tr>
<tr>
<td>Rural village</td>
<td>0.7%</td>
<td>93.6%</td>
<td>95.5%</td>
<td>18.2%</td>
<td>2,371,267</td>
</tr>
<tr>
<td>Rural village</td>
<td>8.2%</td>
<td>93.2%</td>
<td>83.4%</td>
<td>13.8%</td>
<td>160,799</td>
</tr>
<tr>
<td>Rural hamlets &amp; isolated dwellings</td>
<td>6.6%</td>
<td>93.8%</td>
<td>82.3%</td>
<td>11.6%</td>
<td>1,368,463</td>
</tr>
<tr>
<td>Rural hamlets &amp; isolated dwellings (sparse setting)</td>
<td>21.4%</td>
<td>79.5%</td>
<td>57.0%</td>
<td>14.5%</td>
<td>795,579</td>
</tr>
<tr>
<td>URBAN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban major conurbation</td>
<td>0.7%</td>
<td>97.5%</td>
<td>97.5%</td>
<td>63.3%</td>
<td>21,084,897</td>
</tr>
<tr>
<td>Urban city &amp; town</td>
<td>0.7%</td>
<td>96.6%</td>
<td>97.5%</td>
<td>74.4%</td>
<td>8,347,757</td>
</tr>
<tr>
<td>Urban minor conurbation</td>
<td>0.8%</td>
<td>99.5%</td>
<td>97.4%</td>
<td>55.9%</td>
<td>11,764,918</td>
</tr>
<tr>
<td>Urban city &amp; town (sparse setting)</td>
<td>0.8%</td>
<td>99.3%</td>
<td>95.6%</td>
<td>1.2%</td>
<td>74,320</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1.8%</td>
<td>98.4%</td>
<td>94.9%</td>
<td>54.2%</td>
<td>26,074,128</td>
</tr>
</tbody>
</table>

### Scotland: rural & urban broadband connectivity, January 2019

<table>
<thead>
<tr>
<th>Urban-rural classification</th>
<th>Premises below Universal Service Obligation</th>
<th>Premises able to receive 10 Mbps</th>
<th>Premises able to receive 30 Mbps</th>
<th>Premises able to receive 300 Mbps</th>
<th>Total number of premises</th>
</tr>
</thead>
<tbody>
<tr>
<td>RURAL AREAS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accessible rural</td>
<td>19.1%</td>
<td>82.5%</td>
<td>69.5%</td>
<td>5.7%</td>
<td>468,406</td>
</tr>
<tr>
<td>Remote rural</td>
<td>15.8%</td>
<td>85.1%</td>
<td>72.8%</td>
<td>8.2%</td>
<td>297,405</td>
</tr>
<tr>
<td>Very remote rural</td>
<td>21.6%</td>
<td>80.0%</td>
<td>66.3%</td>
<td>1.9%</td>
<td>85,992</td>
</tr>
<tr>
<td>SMALL TOWNS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accessible small towns</td>
<td>0.2%</td>
<td>99.8%</td>
<td>96.3%</td>
<td>10.7%</td>
<td>313,072</td>
</tr>
<tr>
<td>Remote small towns</td>
<td>0.2%</td>
<td>99.8%</td>
<td>95.9%</td>
<td>0.1%</td>
<td>62,465</td>
</tr>
<tr>
<td>Very remote small towns</td>
<td>0.3%</td>
<td>99.7%</td>
<td>94.5%</td>
<td>0.1%</td>
<td>37,577</td>
</tr>
<tr>
<td>URBAN AREAS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large urban areas</td>
<td>0.5%</td>
<td>99.7%</td>
<td>97.9%</td>
<td>61.0%</td>
<td>1,868,155</td>
</tr>
<tr>
<td>Other urban areas</td>
<td>0.7%</td>
<td>99.7%</td>
<td>97.9%</td>
<td>65.6%</td>
<td>927,758</td>
</tr>
<tr>
<td>SCOTLAND TOTAL</td>
<td>3.7%</td>
<td>96.7%</td>
<td>92.7%</td>
<td>45.3%</td>
<td>2,649,633</td>
</tr>
</tbody>
</table>

---

247 The tables were provided by the House of Commons Library and sourced from data from Ofcom, [Connected Nations and infrastructure reports](https://www.parliament.uk/documents/commons-library/research-guides/connected-nations-infrastructure-report/), last accessed 3 September 2019.

## Northern Ireland: rural & urban broadband connectivity, January 2019

<table>
<thead>
<tr>
<th>Urban-rural classification</th>
<th>Premises below Universal Service Obligation</th>
<th>Premises able to receive 10 Mbps</th>
<th>Premises able to receive 30 Mbps</th>
<th>Premises able to receive 300 Mbps</th>
<th>Total number of premises</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>14.6%</td>
<td>85.6%</td>
<td>71.7%</td>
<td>9.1%</td>
<td>244,002</td>
</tr>
<tr>
<td>Mixed urban/rural</td>
<td>4.8%</td>
<td>95.2%</td>
<td>85.7%</td>
<td>34.9%</td>
<td>32,075</td>
</tr>
<tr>
<td>Urban</td>
<td>0.3%</td>
<td>99.8%</td>
<td>98.5%</td>
<td>63.7%</td>
<td>496,318</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>5.0%</td>
<td>95.1%</td>
<td>89.8%</td>
<td>45.3%</td>
<td>772,395</td>
</tr>
</tbody>
</table>

## Premises unable to receive decent broadband by rural urban classification

### England, by rural urban classification, January 2019

<table>
<thead>
<tr>
<th>Rural-urban classification</th>
<th>Premises unable to receive decent broadband</th>
<th>Total premises</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
</tr>
<tr>
<td><strong>RURAL</strong></td>
<td>289,311</td>
<td>6.4%</td>
</tr>
<tr>
<td>Rural hamlets &amp; isolated dwellings (sparse setting)</td>
<td>21,831</td>
<td>32.2%</td>
</tr>
<tr>
<td>Rural hamlets &amp; isolated dwellings</td>
<td>160,541</td>
<td>21.3%</td>
</tr>
<tr>
<td>Rural village (sparse setting)</td>
<td>6,981</td>
<td>8.0%</td>
</tr>
<tr>
<td>Rural village</td>
<td>84,194</td>
<td>6.5%</td>
</tr>
<tr>
<td>Rural town &amp; fringe</td>
<td>15,307</td>
<td>0.7%</td>
</tr>
<tr>
<td>Rural town &amp; fringe (sparse setting)</td>
<td>457</td>
<td>0.4%</td>
</tr>
<tr>
<td><strong>URBAN</strong></td>
<td>144,502</td>
<td>0.7%</td>
</tr>
<tr>
<td>Urban minor conurbation</td>
<td>6,775</td>
<td>0.8%</td>
</tr>
<tr>
<td>Urban city &amp; town</td>
<td>79,460</td>
<td>0.7%</td>
</tr>
<tr>
<td>Urban major conurbation</td>
<td>58,222</td>
<td>0.7%</td>
</tr>
<tr>
<td>Urban city &amp; town (sparse setting)</td>
<td>105</td>
<td>0.2%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>433,813</td>
<td>1.8%</td>
</tr>
</tbody>
</table>

### Scotland: premises unable to receive decent broadband

<table>
<thead>
<tr>
<th>Rural-urban classification</th>
<th>Premises unable to receive decent broadband</th>
<th>Total premises</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
</tr>
<tr>
<td><strong>RURAL AREAS</strong></td>
<td>89,435</td>
<td>19.1%</td>
</tr>
<tr>
<td>Very remote rural</td>
<td>23,914</td>
<td>28.1%</td>
</tr>
<tr>
<td>Remote rural</td>
<td>18,554</td>
<td>21.6%</td>
</tr>
<tr>
<td>Accessible rural</td>
<td>46,967</td>
<td>15.8%</td>
</tr>
<tr>
<td><strong>SMALL TOWNS</strong></td>
<td>711</td>
<td>0.2%</td>
</tr>
<tr>
<td>Very remote small towns</td>
<td>130</td>
<td>0.3%</td>
</tr>
<tr>
<td>Accessible small towns</td>
<td>474</td>
<td>0.2%</td>
</tr>
<tr>
<td>Remote small towns</td>
<td>107</td>
<td>0.2%</td>
</tr>
<tr>
<td><strong>URBAN AREAS</strong></td>
<td>9,166</td>
<td>0.5%</td>
</tr>
<tr>
<td>Large urban areas</td>
<td>6,035</td>
<td>0.7%</td>
</tr>
<tr>
<td>Other urban areas</td>
<td>3,131</td>
<td>0.3%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>99,312</td>
<td>3.7%</td>
</tr>
</tbody>
</table>
### Mobile coverage data

**Rural/urban breakdown of mobile coverage in the UK by nation**

#### Mobile coverage in rural and urban areas, January 2019

<table>
<thead>
<tr>
<th>Country</th>
<th>4G coverage from all operators</th>
<th>Voice &amp; text coverage from all operators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rural</td>
<td>Urban</td>
</tr>
<tr>
<td>England</td>
<td>44%</td>
<td>85%</td>
</tr>
<tr>
<td>Scotland</td>
<td>47%</td>
<td>83%</td>
</tr>
<tr>
<td>Wales</td>
<td>40%</td>
<td>82%</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>40%</td>
<td>67%</td>
</tr>
<tr>
<td><strong>UK</strong></td>
<td><strong>44%</strong></td>
<td><strong>84%</strong></td>
</tr>
</tbody>
</table>

#### A & B roads coverage

<table>
<thead>
<tr>
<th>Country</th>
<th>4G coverage from all operators</th>
<th>Voice &amp; text coverage from all operators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rural</td>
<td>Urban</td>
</tr>
<tr>
<td>England</td>
<td>52%</td>
<td>83%</td>
</tr>
<tr>
<td>Scotland</td>
<td>38%</td>
<td>83%</td>
</tr>
<tr>
<td>Wales</td>
<td>37%</td>
<td>77%</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>45%</td>
<td>66%</td>
</tr>
<tr>
<td><strong>UK</strong></td>
<td><strong>46%</strong></td>
<td><strong>82%</strong></td>
</tr>
</tbody>
</table>

#### Geographical area outdoor coverage

<table>
<thead>
<tr>
<th>Country</th>
<th>4G coverage from no operators</th>
<th>Voice &amp; text coverage from no operators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rural</td>
<td>Urban</td>
</tr>
<tr>
<td>England</td>
<td>2.1%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Scotland</td>
<td>18.6%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Wales</td>
<td>9.2%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>1.8%</td>
<td>0.2%</td>
</tr>
<tr>
<td><strong>UK</strong></td>
<td><strong>8.6%</strong></td>
<td><strong>0.1%</strong></td>
</tr>
</tbody>
</table>
Rural/urban breakdown of mobile coverage in the UK by nation (cont.)

<table>
<thead>
<tr>
<th>Premises coverage (indoor)</th>
<th>4G coverage from all operators</th>
<th>Voice &amp; text coverage from all operators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0%  20% 40% 60% 80% 100%</td>
<td>0%  20% 40% 60% 80% 100%</td>
</tr>
<tr>
<td>Rural</td>
<td>England</td>
<td>Scotland</td>
</tr>
<tr>
<td>Urban</td>
<td>England</td>
<td>Scotland</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A &amp; B road coverage</th>
<th>4G coverage from all operators</th>
<th>Voice &amp; text coverage from all operators</th>
</tr>
</thead>
<tbody>
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Formal minutes

Monday 9 September 2019

Members present:

Neil Parish, in the Chair

Alan Brown
John Grogan
Dr Caroline Johnson
Kerry McCarthy

Mrs Sheryll Murray
David Simpson
Angela Smith

Draft Report (An Update on Rural Connectivity) proposed by the Chair, brought up and read.

Ordered, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 84 read and agreed to.

Boxes 1 to 4 agreed to.

Figures 1 to 7 agreed to.

Summary agreed to.

Annex agreed to.

Resolved, That the Report be the Seventeenth Report of the Committee to the House.

Ordered, That the Chair make the Report to the House.

Ordered, That embargoed copies of the Report be made available, in accordance with the provisions of Standing Order No. 134.

[Adjourned till Wednesday 16 October at 9.15 a.m.]
Witnesses

The following witnesses gave evidence. Transcripts can be viewed on the inquiry publications page of the Committee’s website.

**Wednesday 12 June 2019**

**Jeremy Leggett**, Rural Policy Advisor, Action with Communities in Rural England, **Graham Briggs**, Chief Executive Officer, Rural Services Network, and **Mark Bridgeman**, Deputy President, Country Land Business Association

**Kim Mears**, Managing Director for Strategic Infrastructure Development, Openreach, **Malcolm Corbett**, Chief Executive Officer, Independent Networks Cooperative Association, and **Hamish MacLeod**, Director, Mobile UK

Q1–40

**Wednesday 10 July 2019**

**Margot James MP**, Minister for Digital and the Creative Industries, Department for Digital, Culture, Media and Sport, and **Lord Gardiner of Kimble**, Parliamentary Under Secretary of State for Rural Affairs and Biosecurity, Department for Environment, Food and Rural Affairs

**Lindsey Fussell**, Group Director Consumer and External Relations, Ofcom, and **Katie Pettifer**, Public Policy Director, Ofcom

Q113–179

Q180–215
Published written evidence

The following written evidence was received and can be viewed on the inquiry publications page of the Committee’s website.

RBD numbers are generated by the evidence processing system and so may not be complete.

1. Action with Communities in Rural England (RBD0019)
2. Arqiva (RBD0032)
3. Association of Convenience Stores (RBD0028)
4. Blackdown Hills Parish Network (BHPN) and Broadband for Rural Devon & Somerset (B4RDS) (RBD0039)
5. The Bit Commons (RBD0002), (RBD0005), (RBD0053)
6. BT Group (RBD0048), (RBD0050)
7. Butler, Mr David (RBD0007)
8. Caravan and Motorhome Club (RBD0020)
9. Cheshire east Council (RBD0038)
10. CityFibre (RBD0031)
11. CLA (RBD0011)
12. Communication and Media Research Institute (RBD0014)
13. Cornwall and Isles of Scilly Local Enterprise Partnership (RBD0023)
14. Countryside Alliance (RBD0043)
15. Cumbria County Council (RBD0026)
16. Department for Digital, Culture, Media and Sport (RBD0046), (RBD0055)
17. The Department of Environment, Food and Rural Affairs (RBD0054)
18. Derbyshire Dales District Council (RBD0008)
19. Digital Policy Alliance (RBD0042)
20. East Riding of Yorkshire Council (RBD0017)
21. Gerli, Mr Paolo (RBD0034)
22. Hambleton District Council (RBD0021)
23. Hampshire Rural Forum (RBD0013)
24. Hastoe Housing Association (RBD0004)
25. Historic Houses (RBD0018)
26. Independent Networks Co-operative Association (RBD0035)
27. Internet Services Providers Association (RBD0037)
28. Law Society of Scotland (RBD0022)
29. Leicestershire County Council (RBD0015)
30. Local Government Association (LGA) (RBD0010)
31. Lothian Broadband Networks Limited (RBD0036)
32. Membury Parish Council (RBD0006)
33. Mobile UK (RBD0041)
34 NALC (RBD0009)
35 National Farmers’ Union (RBD0025)
36 Nominet (RBD0027)
37 North Yorkshire County Council (RBD0024)
38 Ofcom (RBD0044), (RBD0051)
39 Openreach (RBD0049)
40 Royal Institution of Chartered Surveyors (RBD0030)
41 Rural Services Network (RBD0012)
42 Shropshire Council (RBD0040)
43 Staffordshire County Council (RBD0033)
44 University of Aberdeen (RBD0016)
45 Vodafone UK (RBD0045)
46 Watkin, Brian (RBD0003)
47 Which? (RBD0029)
List of Reports from the Committee during the current Parliament

All publications from the Committee are available on the publications page of the Committee’s website. The reference number of the Government’s response to each Report is printed in brackets after the HC printing number.

**Session 2017–19**

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