



2 Marylebone Road
London NW1 4DF
t 020 7770 7000
f 020 7770 7600
which.co.uk

700 MHz and 3.6-3.8 GHz award
Spectrum Group
Ofcom
Riverside House
2A Southwark Bridge Road
London
SE1 9HA

Which? Response to Ofcom's 'Award of the 700 MHz and 3.6-3.8 GHz spectrum bands' consultation

Summary

Mobile phones are an increasingly important part of people's everyday lives. Ofcom research found that the majority of consumers and businesses acknowledged the increasing reliance on mobile phones for a range of needs - social, economic and cultural. However, current levels of mobile coverage are not living up to people's expectations.

Lack of good mobile connection is having a negative impact on consumers. As well as causing frustration, it also causes issues such as social exclusion - missing out on contact with family and friends and impacting on feelings of safety and social connectedness.¹

"My daughter was involved in an accident and nobody could get in touch because the mobile simply did not pick up the signal. The message finally arrived late afternoon after several hours. It is worrying that one cannot be contacted in an emergency and it is not good enough." [Which? Conversation participant]²

Which? believes that all consumers should have access to good quality (4G) mobile coverage from all operators wherever they live, work and travel. **This spectrum auction is a key opportunity to improve mobile coverage for consumers across the UK.** The auction is also one mechanism through which Ofcom can help to deliver the Government's ambition of 95% geographic coverage by 2022.³

The Government has said that this spectrum auction *"presents a vital opportunity to materially improve mobile coverage across the UK...and this should be the key priority in the conduct of that auction"*.⁴ Ofcom must make the most of this opportunity to improve

¹ Lu, Hui, Charlene Rohr, Peter Burge, and Alison Grant. 2014. 'Estimating the value of mobile telephony in mobile network not-spots'. https://www.rand.org/pubs/research_reports/RR641.html.

² <https://conversation.which.co.uk/technology/mobile-phone-coverage-service-ofcom/>

³ DCMS. 2019. Statement of Strategic Priorities for telecommunications, the management of radio spectrum and postal services.

⁴ DCMS. 2019. Statement of Strategic Priorities for telecommunications, the management of radio spectrum and postal services.

coverage for consumers by attaching ambitious coverage obligations to the spectrum sale. At the moment it is not doing so. Therefore, Which? believes that:

1. **Ofcom must reassess the design of the coverage obligations.** Ofcom has been overly cautious in its approach and has placed too much weight on the concerns raised by operators in response to its March 2018 consultation,⁵ with only secondary regard given to the consumer perspective.
2. The UK Government has re-stated its ambition for 95% geographic coverage by 2022.^{6,7} **Government must now work with Ofcom and industry to set out a clear plan, without delay, of the steps that will be taken to achieve this ambition and timeframe of each step to meet the 2022 deadline.** Without a clear plan in place consumers will continue to lose out, with mobile coverage not meeting their needs, or expectations. In developing this plan, Government must take account of the technical advice provided by Ofcom, and provide clear direction as to what the roles are of both Ofcom and Government in achieving this ambition.

In reconsidering the design of the coverage obligations, there are a number of specific issues Ofcom must address:

- **Ofcom has not presented sufficient evidence to conclude that the geographic coverage obligation should be reduced from 92% coverage⁸ to 90%.** Ofcom's cost-benefit assessment relies on estimates of consumer benefits from 2014 and takes a very conservative interpretation of those estimates. There is also no justification for its assumption that no benefits will be delivered to consumers within the first four years of the obligation. This is inconsistent with Ofcom's own arguments for the timings of the obligations and the calculation of costs. These assumptions make a material difference to the benefit calculations.
- **Ofcom has taken a conservative approach when deciding on the additional coverage requirements.** The 'new sites requirement' is not ambitious enough and the reasoning behind the level of the 'premises requirement' is unclear. Ofcom itself acknowledges that 500 new sites is at the 'conservative end of the range...to deliver the benefits we are seeking'. Ofcom must fully justify its reasoning for this approach and provide a detailed analysis as to why it thinks these requirements may be 'broadly equivalent' to its original proposals for a 92% geographic coverage obligation.

⁵ Ofcom. March 2018. 'Improving Mobile coverage: Proposals for coverage obligations in the award of the 700 MHz spectrum band'. Available at: https://www.ofcom.org.uk/data/assets/pdf_file/0022/111937/consultation-700mhz-coverage-obligations.pdf

⁶ DCMS. 2019. Statement of Strategic Priorities for telecommunications, the management of radio spectrum and postal services.

⁷ The 95% geographic coverage ambition is not new. It was set out in the Conservative Party Manifesto in 2017.

⁸ As proposed in the March 2018 consultation.

- Ofcom’s definition of the **quality of the coverage, specifically the 2 Mbps data connection**, is overly conservative considering that the latest versions of 4G mobile technologies are capable of much faster speeds.⁹ While 2 Mbps is sufficient for users to watch glitch free mobile video today, in the longer term, services are likely to require far faster speeds for example, as a result of higher definition video services and the emergence of new bandwidth hungry applications (e.g. virtual reality).
- **Which? disagrees that the deadline for meeting the obligations should be extended from three to four years.** Ofcom states that its decision is based on a ‘small number of sites’ where delivery within the three year timescale ‘could be challenging’. As a minimum, Ofcom should put in place measures, such as the setting of interim targets, to ensure that a majority of the coverage obligations are delivered within the first three years. This will ensure that consumers have access to better quality mobile coverage as soon as possible.
- We disagree with the proposed approach to auctioning the obligations. In particular the change in Ofcom’s approach which results in a **risk that the obligations could go unsold while the spectrum itself is sold.** If the coverage obligations remain unsold, a key opportunity for improving coverage will have been missed to the detriment of consumers. Where some or all of the coverage obligations are sold, it is essential that Ofcom monitors compliance, and takes strong action if the obligations are not delivered within the timeframe.

Introduction

Mobile phones are an increasingly important part of everyday life, with 78% of UK adults now owning a smartphone. Ofcom research found that the majority of consumers and businesses acknowledged the increasing reliance on mobile phones for a range of needs - social, economic and cultural - and as a result there is a ‘growth in expectations that good phone coverage is available everywhere’.¹⁰

Consumers value good quality mobile coverage, and expect to have ‘always-on’ connectivity - enabling them to use their mobile device wherever they live, work and travel. However, the data from Ofcom’s latest Connected Nations report show that mobile coverage is not living up to people’s expectations. A significant proportion of the UK’s landmass does not receive good mobile coverage - only 66% of UK landmass has good 4G coverage from all operators, and only 77% of UK premises have good indoor 4G coverage from all four operators.

“My work phone.....rarely gets any signal so makes it difficult to work from home. I have had to reinstate a landline which is frustrating” [Which? Conversation participant¹¹]

⁹ <https://www.opensignal.com/reports/2018/04/uk/state-of-the-mobile-network>

¹⁰ Jigsaw for Ofcom. 2017. Mobile coverage: Qualitative Research. Available at: https://www.ofcom.org.uk/__data/assets/pdf_file/0021/108129/jigsaw-mobile-coverage-qualitative-research.pdf

¹¹ <https://conversation.which.co.uk/technology/mobile-phone-coverage-service-ofcom/>

Today, consumers use their mobile phone for more than just calls and texts - from working on the move and keeping in touch, to finding information and maps. This is evidenced by Ofcom's findings that mobile data use is increasing rapidly - by 40% between 2016 and 2017. Research by Jigsaw for Ofcom found that in areas of good coverage, consumers were able to make use of their mobile phone for a wide range of services and features with few problems. Meanwhile, in areas of poor coverage, people used their mobile phones for essential purposes such as emergency calls but poor coverage meant they were 'an unreliable safety net'.¹²

A lack of good quality mobile coverage has negative impacts on consumers. As well as causing frustration, there are also related social exclusion problems, for example, missing out on contact with family and friends and impacting on feelings of safety and social connectedness. It also leads to economic issues, for example the inability to use time effectively/work on the move, and potential impacts on tourism.¹³

Which? believes that all consumers should have access to good quality (4G) mobile coverage from all operators wherever they live, work and travel. While we welcome Ofcom's proposed use of coverage obligations to deliver improvements in mobile coverage for consumers, we have a number of specific concerns about the detail of Ofcom's proposals.

Ofcom has not put consumers at the heart of its proposals for the spectrum award

Which? acknowledges that there have been improvements in coverage in recent years. However, more needs to be done to deliver the mobile coverage that consumers expect. The auction of the 700 MHz spectrum band is a key opportunity for improving mobile coverage across the UK, given the technical characteristics of this spectrum.¹⁴ It is also one mechanism through which Ofcom can help deliver the Government's ambition of 95% geographic coverage by 2022.¹⁵ The Government itself has said that this auction "*presents a vital opportunity to materially improve mobile coverage across the UK...and this should be the key priority in the conduct of that auction*".¹⁶

We are concerned that Ofcom is not making the most of this important opportunity to improve mobile coverage by not attaching ambitious enough obligations to the sale of this spectrum. In particular, we believe that Ofcom has been overly cautious in its approach and has placed greater weight on the concerns raised by operators in response to its March 2018 consultation, leading to a change in its approach. For example, Ofcom highlights

¹² Jigsaw for Ofcom. 2017. Mobile coverage: Qualitative Research. Available at: https://www.ofcom.org.uk/__data/assets/pdf_file/0021/108129/jigsaw-mobile-coverage-qualitative-research.pdf

¹³ Lu, Hui, Charlene Rohr, Peter Burge, and Alison Grant. 2014. 'Estimating the value of mobile telephony in mobile network not-spots'. https://www.rand.org/pubs/research_reports/RR641.html.

¹⁴ 700 MHz spectrum is well suited to improving coverage as these airwaves are good at travelling over wide areas and indoors.

¹⁵ DCMS. 2019. Statement of Strategic Priorities for telecommunications, the management of radio spectrum and postal services.

¹⁶ DCMS. 2019. Statement of Strategic Priorities for telecommunications, the management of radio spectrum and postal services.

concerns submitted by operators that its original proposals may have underestimated the costs of meeting the obligations, leading to them going unallocated.

Specifically, we are concerned about the reduction in the level of the geographic coverage obligation from 92% to 90% and the complete removal of the third obligation which would have ensured indoor coverage to some of those premises that have no indoor coverage from any operator. While Ofcom states that the additional premises and mast requirements that form part of its new proposals “may be ‘broadly equivalent’” to those that would have been delivered by its previous proposals, Ofcom does not provide a detailed analysis of why it believes this to be the case.

As we demonstrate below it appears that only secondary regard has been given to the consumer benefits of better mobile coverage. Given the importance consumers place on having good mobile coverage, Ofcom should prioritise the benefits for consumers over maximising revenue from the spectrum auction.

Ofcom’s analysis does not justify the reduction in the coverage obligation from 92% to 90%

Which? believes that the cost-benefit analysis presented in the consultation is insufficient to conclude that the geographic coverage obligation should be for 90% coverage, as opposed to the 92% proposed in the March 2018 consultation. We believe that Ofcom’s evidence base for the revised obligation is weak, its assumptions are not appropriately tested and ultimately its analysis is not fit for purpose. In particular we disagree with a number of Ofcom’s assumptions:

- **That there is no growth in consumer benefits over time;**
- **That it will take four years for the initial benefits to be delivered;**
- **The use of 2014 willingness to pay estimates.**

No growth in benefits over time

While Ofcom adjusts its benefits by the Green Book’s social time preference rate of 3.5%, it does not account for any increase in benefits driven by increased use of mobile data services and population growth.¹⁷ Given that mobile data use has grown fourfold since 2014, it seems reasonable to expect that access to 4G will become increasingly important as mobile internet use becomes more bandwidth intensive. As such we would expect to see an increase in both the average benefit per consumer and the total number of consumers benefiting over time.

Four years to deliver benefits to consumers

¹⁷ The ONS projects population growth at between 0.6% and 0.3% per annum over the potential licence period.

Ofcom's assumption that no benefits will be delivered to consumers within the first four years of the obligation is unrealistic, and Ofcom provides no justification for this assumption. It is also inconsistent with the calculation of costs - where Ofcom assumes '*an operator would meet the obligation by building an equal number of sites in each of the four years from 2020 to 2023*' - and with Ofcom's argument relating to the four year deadline to meet the obligation: "*we anticipate that to meet this deadline, operators are likely to deploy a significant number of sites well before this [4 years], and that consumers should therefore benefit from some coverage improvements beforehand*".

Which? considers that operators could begin delivering the obligation relatively quickly though upgrading existing sites and potentially through wholesale access agreements with other operators. This makes Ofcom's assumption of no benefits within the first four years unreasonably conservative, which makes a material difference to the benefit calculations (see details in Box 1).

Conservative approach to willingness to pay analysis

Ofcom's assessment of the benefits of geographic coverage relies on willingness to pay (WTP) estimates from 2014. Ofcom itself acknowledges that these estimates from the 2014 RAND Europe research are imperfect for the calculation of benefits from improved coverage.

Which? believes that Ofcom's point estimates of the level of per consumer benefit (i.e. £5, £2, £0.10 for rural residents, other rural and urban consumers) are conservative given the WTP estimates from the RAND research. For example, the closest applicable WTP value in the RAND study for 'rural residents' was £11.40 yet Ofcom settled on a social benefit of £5.

While we recognise that there may be reasons why the social benefits could be lower than the estimates from the RAND study, there are also good reasons that they may not be - for instance average monthly data increased fourfold between 2014 and 2017. On this basis we believe that it is not acceptable that Ofcom's illustrative calculations presented in Figure A12.9 of the consultation document only include alternative assumptions where its estimates of the benefits are lower than £5, £2 and £0.10. This is particularly important as our analysis shows that reasonable assumptions of larger benefits could potentially justify the costs of a more challenging coverage obligation (see Box 1 below).

Box 1: Adjusted cost benefit assumptions of improving coverage

We have conducted analysis to test whether, under reasonable adjustments to Ofcom's assumptions, the total benefits delivered by improved coverage could justify the costs of a 92% coverage obligation, estimated at **£670m to £860m**.

Ofcom's analysis assumes per-consumer benefits of £5, £2 and £0.10 per month depending on the type of consumer (rural resident, other rural, urban). Given that the closest willingness to pay estimates identified by Ofcom in the RAND research were well above these values, we believe that higher levels of benefit should also have been tested. Ofcom also assumed no benefits being delivered before year 4 and no growth in benefits over time. In the table below we show what the estimated levels of total social benefit would be under different assumptions around the level, growth and speed of delivery of the benefits.

Total social benefits delivered under different assumptions

Assumed benefits per consumer (rural residents, other rural, urban)	Scenario 1	Scenario 2	Scenario 3	Scenario 4
£5.00, £2.00, £0.10	£500m	£750m	£570m	£820m
£7.50, £2.50, £0.15	£680m	£1,000m	£770m	£1,110m
£10.00, £3.00, £0.20	£860m	£1,270m	£970m	£1,400m

Scenario 1 assumes no benefits delivered before year four and no growth in benefits over time, as in the illustrative calculations in Annex 12 of the consultation. Scenarios 2,3 & 4 alter those assumptions as follows:

- Scenario 2 includes benefits growth of 3.5%¹⁸
- Scenario 3 includes benefits accruing incrementally over the first four years
- Scenario 4 includes both of the altered assumptions from 2 and 3

The table shows that altering these key elements of Ofcom's assumptions leads to a material increase in the level of estimated social benefits delivered by improved coverage, **in many cases exceeding the required level of benefit to justify the costs of a 92% coverage obligation**. We consider that the varying scenarios presented in this table are at least as plausible as those presented by Ofcom in its illustrative calculations. While they show a particularly large range of benefits, they illustrate that Ofcom has not presented sufficient evidence to support its decision to reduce the obligation from 92% to 90%.

¹⁸ We have chosen a 3.5% growth in benefits to counteract the effects of time preference discounting.

Taking all these factors into consideration, Which? believes that Ofcom's analysis is insufficient to rule out a coverage obligation of 92%.

Ofcom has not fully justified the proposed 'new sites' and 'premises' requirements

Ofcom must fully justify its reasoning for this approach and provide a detailed analysis as to why it thinks the 'new sites' requirement, along with the 'premises requirement' mean that these new proposals may be 'broadly equivalent' to its original proposals for a 92% geographic coverage obligation.

New sites

Ofcom has taken a conservative approach when deciding on the appropriate level of the 'new sites' requirement. In particular, Ofcom's reasoning for not being more ambitious is unclear. Ofcom itself acknowledges that 500 new sites is at the 'conservative end of the range...to deliver the benefits we are seeking'.

Premises

Ofcom's March 2018 consultation included proposals for a premises obligation that would have required the obligated operator to provide coverage to 60% of currently unserved premises across the whole UK and in each of the nations. This design ensured that the benefits were targeted to directly benefit users.

However, Ofcom is now proposing that the obligated operators should provide '*good quality service outdoors for at least 140,000 premises to which it currently does not provide good coverage*'. While we appreciate that Ofcom expects this obligation to ensure that the envisaged social benefits are delivered, we consider that Ofcom is missing a major opportunity to improve indoor coverage. It provides no evidence as to why it expects around half these 140,000 premises could receive a signal that provides good indoor coverage - and, regardless, this will amount to far fewer premises that would receive indoor coverage than specified by the original proposals. We recognise the potential for overspill benefits to those premises that currently have good outdoor coverage to getting good indoor coverage, but do not think there is sufficient guarantee under the revised proposals.

Receiving good quality indoor coverage is essential. Only receiving good outdoor premises coverage is not good enough and is unlikely to deliver the maximum benefit for consumers. Ofcom's Communications Market Report found that even at home, 37% of time spent online is on a smartphone but consumers will also be using their mobile indoors for sending texts and making and receiving calls. Therefore, Which? believes that the proposed 'premises requirement' does not go far enough to ensure that consumers have access to good quality connectivity when they are inside.

Whilst the 'premises requirement' may encourage more competition in some areas, this is based on Ofcom's expectation that it is likely to deliver improved coverage in areas that are currently partial not-spots. However, this will be dependent on which operators win the

obligation. While we would be glad to see greater levels of competition in partial not-spots to ensure consumer choice, we are concerned that some areas may still be left behind.

Given the increased push toward rural roaming, again cited in the Government's draft Statement of Strategic Priorities, Ofcom should consider the best way to design the 'premises requirement'. For example, is it optimal at this stage to have more areas that are partial not-spots, as these are the areas which would also benefit from rural roaming if it is implemented? Meanwhile, total not-spots will not be able to benefit from rural roaming, and instead require other types of intervention to deliver mobile coverage.

Ofcom should design more specific coverage obligations across the Nations

As stated in our response to the March 2018 consultation, Which? supports Ofcom taking action to address the differing levels of mobile coverage across the UK. However, to ensure the widest consumer benefits within each Nation, we consider that Ofcom should assess which areas in each Nation are most likely to benefit from greater coverage based on where the consumers are that need it. A similarly granular approach was taken in Spain for the auction of the 800 MHz spectrum. By taking a more granular approach in defining the obligations, focused on specific localities, Ofcom can ensure it is those areas where people need coverage the most in each Nation that receive it.

The four year deadline to deliver the obligation is inconsistent with Government commitment of 95% coverage by 2022

The UK Government has committed to extending coverage to 95% of the UK's geography by 2022. It has stated its belief that the 700 MHz spectrum auction '*presents a vital opportunity to materially improve mobile coverage across the UK*'.¹⁹ However, Ofcom's proposals that the coverage obligations should now be delivered within four years does not appear to be consistent with this commitment.

Ofcom originally proposed in March 2018 that the obligations should be delivered within three years. Which? considers that these new proposals are less ambitious, and yet Ofcom has proposed that they should now be delivered over four years. It states that this is because for a small number of sites delivery in this timescale could be challenging. However, Ofcom also cites evidence from operators in its consultation that typically, for a rural site, they would plan for an 18-24 month delivery cycle.

Given the mixed evidence, Which? believes that Ofcom should put in place interim coverage requirements to ensure that wherever possible the rollout is as quick as possible. It is suboptimal to hold up the entire obligation for the 'small number' of sites where delivering within three years would be challenging. Putting interim targets in place would ensure that where possible, consumers are able to benefit from coverage improvements more quickly.

¹⁹ DCMS, 2019. Statement of Strategic Priorities for telecommunications, the management of radio spectrum and postal services.

A 2 Mbps data connection for the coverage obligations is not ambitious enough

In our response to Ofcom's March 2018 consultation, we highlighted our concerns with the quality level of the coverage. In particular, we considered the 2 Mbps data connection to be overly conservative. We continue to believe that Ofcom's measure of a good consumer experience is inadequate i.e. data services that deliver speeds of at least 2 Mbps.

The 2 Mbps minimum threshold is similar to the 800 MHz coverage obligation which was set more than six years ago.²⁰ Ofcom's definition appears to be overly conservative considering that the latest versions of 4G mobile technology is capable of much higher speeds. In April 2018, Opensignal reported that the average 4G speed in the UK was 23.1 Mbps.²¹ This is particularly important given that 700 MHz spectrum is very well suited to improving coverage in rural areas, where fixed broadband speeds are likely to be lower.

Based on Ofcom's proposed timings for the auction, it would be at least 2024 before the proposed coverage obligations are due to be met. By then, 5G New Radio (NR) networks, capable of speeds over 1 Gbps are expected to be well established. While 2 Mbps is sufficient for users to watch glitch free mobile video at present, it is almost certain that by 2040,²² higher definition video service and the emergence of new bandwidth hungry applications (e.g. virtual reality) will require significantly more than the 2 Mbps proposed by Ofcom. A minimum speed of 2 Mbps is likely to be insufficient to deliver a good consumer experience, especially in the longer term.

Ofcom's 2 Mbps for data connections is relatively modest compared to the service obligations attached to the awards of other sub-1 GHz bands. As we stated in our response to Ofcom's previous consultation, in Spain, any operators that have 2×10 MHz or more of 800 MHz spectrum are obliged to jointly cover 90% of villages with fewer than 5,000 inhabitants with a speed of at least 30 Mbps by the end of 2019. In Germany, the multiband auction in 2015 included a coverage obligation of 50 Mbps per sector on each operator, which should guarantee a general service offering download speed of 10 Mbps or more. In Sweden the proposals for the forthcoming 700 MHz auction include a coverage obligation of 10 Mbps.²³

Consumers in rural areas are likely to be more dependent on mobile networks than a typical urban user due to the lack of good quality fixed broadband and wi-fi (public and private) access. Urban users are likely to benefit from earlier deployment of new technologies, meanwhile rural users could lag further behind if the threshold for a 'good' service is set at just 2 Mbps. Therefore, a higher threshold for the coverage obligation could help lessen the digital divide.

²⁰ Ofcom. 4G Coverage Obligation Notice of Compliance Verification Methodology: LTE. Statement, 12 November 2012.

https://www.ofcom.org.uk/data/assets/pdf_file/0026/58292/4gcov-verification.pdf

²¹ <https://www.opensignal.com/reports/2018/04/uk/state-of-the-mobile-network>

²² Given that the term of the 700 MHz licence is 20 years.

²³ DotEcon and Athea for Ofcom. Spectrum value of 800MHz, 1800MHz and 2.6GHz. July 2012.

The broadband Universal Service will provide a safety net of 10 Mbps download speed. We consider that mobile coverage should be viewed in similar terms. Furthermore, Ofcom itself recognises that *'over time, consumers are likely to increasingly expect a fuller set of services to be available requiring a good quality data service'*.²⁴ Therefore, as consumers seek good quality connectivity at all times, Ofcom should reconsider the quality of service definition and ensure it is sufficient to meet consumer needs now and in the future.

The auction design risks the coverage obligations going unsold and consumers unable to benefit from improved mobile coverage

This consultation proposes an alternative approach to the sale of the coverage obligations that will see the obligations offered as a discount to the price of the spectrum. Which? is concerned that this approach could see the coverage obligations go unsold in the auction. If, that happens, a key opportunity for improving coverage will have been missed, to the detriment of consumers.

Equally important, where some or all of the coverage obligations are sold, it is essential that Ofcom monitors compliance and takes strong action if the obligations are not delivered within the timeframe. It will only be once consumers are benefiting from improved coverage that the auction can be considered a success.

Ofcom and Government need to work together and set out a clear plan to deliver the Government ambition of 95% UK geographic coverage

It is essential that Ofcom and Government work together more closely to ensure that consumers have access to good quality mobile coverage across the UK. The Government's draft Statement of Strategic Priorities for the telecoms sector sets out the Government's ambition for coverage and its belief in the opportunity this spectrum auction presents to improve coverage.

Coverage obligations are just one lever available to help improve mobile coverage. More will need to be done to improve coverage further. Rural roaming is one area that Government is urging Ofcom to look at as an option to improve partial not-spots. Which? appreciates that in many rural areas, competitive provision of mobile coverage is likely to be limited, meaning that the consumers are unlikely to be able to benefit from a choice of providers. Ofcom must undertake a detailed analysis of the role rural roaming could play to mitigate this lack of choice and possible consumer harm. However, we are concerned that this is not something included in Ofcom's 2019/20 Annual Plan. We note that Ofcom is allowing spectrum sharing as one way to meet the proposed obligations in this spectrum auction.

Beyond the sentiment expressed by Government in the draft Statement of Strategic Priorities, Government must now work with Ofcom and industry to set out a clear plan of the steps that will be taken to achieve this ambition, to ensure that consumers get the mobile coverage they need. In developing this plan, Government must take account of the technical

²⁴ Annex 11 of the Consultation Document.

advice provided by Ofcom,²⁵ and provide clear direction as to what the roles are of both Ofcom and Government in achieving this ambition. The plan must describe in detail the measures that will be put in place to tackle both partial and total not-spots, the timings of each measure and how the implementation of the plan will be monitored. Without a clear plan in place consumers will continue to lose out, with mobile coverage not meeting their needs, or expectations.

Conclusion

Consumers should have access to good quality (4G) mobile coverage wherever they are - at home, work and on the move. Ofcom must make the most of this key opportunity to improve mobile coverage for consumers across the UK, and help to deliver the Government ambition of 95% geographic coverage by 2022.

Which? believes that consumers should be at the heart of Ofcom's proposals for awarding this spectrum. Therefore, Ofcom must reassess the proposed coverage obligations.

In addition, to ensure further coverage improvements, beyond this spectrum auction, Government must now work with Ofcom and industry to set out a clear plan, without delay, of the steps that will be taken to achieve 95% geographic coverage across the UK by 2022, to ensure that consumers get the mobile coverage they need. This plan should describe in detail the roles of both Government and Ofcom in delivering this, the measures that will be put in place to tackle both partial and total not-spots, the timings of each measure to meet the 2022 deadline and how the implementation of the plan will be monitored.

For further information please contact Colum McGuire, External Affairs Manager, Which? at [✂ redacted].

March 2019

²⁵ Ofcom, 2018. 'Further options for improving mobile coverage: Advice to Government'. Available at: https://www.ofcom.org.uk/__data/assets/pdf_file/0017/120455/advice-government-improving-mobile-coverage.pdf