

Economy, Infrastructure and Skills
Committee

Digital Infrastructure in Wales

September 2017



National Assembly for Wales
Economy, Infrastructure and Skills Committee

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The Committee was established on 28 June 2016 to examine legislation and hold the Welsh Government to account by scrutinising expenditure, administration and policy matters, encompassing (but not restricted to): economic development; transport; infrastructure; employment; skills; and research and development, including technology and science.

Current Committee membership:



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Welsh Conservative
Montgomeryshire



Hannah Blythyn AM
Welsh Labour
Delyn



Hefin David AM
Welsh Labour
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UKIP Wales
South Wales East

Contents

Chair's foreword	5
Recommendations	6
01. Background to the inquiry	9
02. Broadband connectivity	10
03. Mobile connectivity	15

Chair's foreword

Connectivity is no longer a 'nice-to-have' when it comes to living and working in Wales. For many people, including some of the businesses we spoke to as part of this inquiry, it is now considered an essential service – like water and electricity.

In recent years more and more people are getting connected at increasingly high speeds. This is good news, but a consequence of this improvement is that frustration and a sense of injustice grows in those left behind.

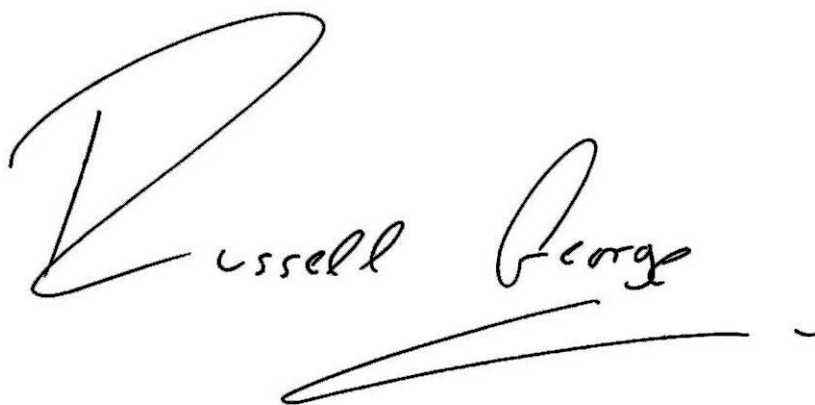
Those who are connected at low speeds, look enviously at those able to access higher speeds. And those with nothing at all are left with the greatest frustrations.

Wales's topography and population distribution have proved structural disadvantages in a world where market forces have driven roll out. While the Welsh Government's Superfast Cymru scheme – delivered in partnership with BT – has connected high numbers of people (96% of premises in Wales can access it), there remain pockets where it has not been able to reach. The roll out of mobile phone coverage follows a similar pattern.

We want to see everyone in Wales able to access the internet at fast speeds – whether for work or entertainment. But we also need to build a structure that is fit for the future. Our demand for bandwidth has grown exponentially, and is likely to continue to do so. Where we once needed enough to send some emails and look at a website, now we routinely stream TV programmes and films to a range of devices, at home and at work.

We have made a series of recommendations to help Wales develop a digital infrastructure which is as fast and reliable as that enjoyed anywhere else in the UK.

Filling in the gaps so that everyone can receive a good service is the minimum requirement. More can be done to help people take up those services once available, and to take potentially controversial steps to ensure that the connectivity many of us take for granted, is available to all.

A handwritten signature in black ink that reads "Russell George". The signature is written in a cursive style with a large, sweeping initial 'R' and a long horizontal line underneath the name.

Russell George AM,
Chair, EIS Committee

Recommendations

Recommendation 1. Communication problems have dogged what has otherwise been a successful Superfast Cymru scheme. Some lessons appear to have been learned along the way and it is vital that any future programmes take these on board from the start. BT should continue to inform potential customers that they are able to access superfast services beyond the end of its contract. The Welsh Government should consider making communication with the public a performance requirement of any future contracts..... Page 14

Recommendation 2. The Welsh Government should consider establishing a repayable grant or equity scheme to enable small operators to fill in gaps in the network. It should also explore the viability of public ownership or forming public partnerships with service providers to develop infrastructure in specific areas. Page 14

Recommendation 3. Future schemes should build on the success of Access Broadband Cymru and Ultrafast Connectivity Voucher which respond to consumer demand. By adding a repayable grant or equity scheme to its toolbox, the Welsh Government would have three means by which to support the final few thousand premises to enjoy the benefits of fast broadband access. The Welsh Government should also tailoring this scheme to make it more accessible to Small and Medium-sized Enterprises. Page 14

Recommendation 4. It is vital that the hardest to reach communities and individuals are now engaged in the process to ensure that potential solutions can be tailored to their needs. Connecting the final 4% is will be more expensive, and it is vital that communities buy in to the solutions being proposed..... Page 14

Recommendation 5. The Welsh Government should conduct an assessment of future needs to inform the next stages of development. Given the cost of connecting the final 4%, which have proved beyond the reach of the market, it is vital that their connectivity is suitable not just for the present, but also for the future. Page 14

Recommendation 6. The Welsh Government should consider making future public subsidy conditional on supporting government policy to improve digital infrastructure and to ensure that it meets the needs of consumers in the future,

in particular any likely convergence between broadband and mobile internet connectivity. Page 17

Recommendation 7. The Welsh Government, considering local topography, should reform the planning regime to support investment in digital connectivity, in particular to allow the installation of masts that cover a wider geographical range. In turn, the Welsh Government should work with operators and planning authorities to ensure that plans are clearly communicated to the affected communities and that the key benefits of mobile connectivity are actively promoted. Page 20

Recommendation 8. While the Welsh Government does not have the power to compel mobile operating companies to share their infrastructure, it should explore the feasibility of using the planning regime to encourage operators to share infrastructure to ensure a range of coverage in current not spot areas. Page 20

Recommendation 9. The Welsh Government should work with Mobile Network Operators and Ofcom to consider whether offering non-domestic rates relief for new masts in non-commercial areas would have a significant impact on investment. Page 20

Recommendation 10. The Welsh Government’s forthcoming Mobile Action Plan should include firm commitments to work closely with stakeholders, in particular to:

- collaborate with local Government, UK Government, regulators and the industry to develop mobile infrastructure making the most of existing infrastructure and publicly owned assets where possible;**
- collaborate with stakeholders from across the industry to ensure that Mobile Network Operators share coverage in not-spot areas; and**
- collaborate with local authorities and landowners to ensure that Mobile Network Operators can have access to publicly funded assets to install masts and other apparatus and to explore the benefits of mast sharing with the emergency communication system in rural not-spots.**

..... Page 21

Recommendation 11. Ofcom needs to use all its regulatory powers to ensure that it meets its target of 100 per cent geographical coverage. At a minimum, this should be a condition of future spectrum auctions. Page 21

Recommendation 12. The Welsh Government and planning authorities should provide a tool kit with clear business and grant application advice to communities who wish to access public funds to create their own solutions to enhance mobile connectivity in their area. Examples of good practice should also be promoted in rural areas where connectivity is problematic. Page 21

01. Background to the inquiry

1. Over the last decade, as more and more homes in Wales have become better connected, the frustration of those not able to participate in the digital world has only grown. The inquiry heard the frustrations of businesses that find themselves locked out of the digital economy due to lack of access. Or priced out due to their rurality and the cost of appropriate digital infrastructure.
2. The Welsh Government has been active in attempting to link up those areas where the market is failing to provide a service. Its flagship scheme is on target to succeed in linking 96% of premises in Wales to fast broadband. Its smaller supplementary schemes are widely considered to be successful.
3. The Committee commissioned a video <https://youtu.be/Dc7OusQYrXY> to hear directly the views of small business owners.
4. The Committee also heard from places like Tregroes, and Ger-y-Gors and the issues they have had fighting for 21st century connections.
5. Yet, communications problems have hampered take up – even where available.
6. And there are fundamental questions arising about what happens next: Should Welsh Government invest to reach 100% coverage, or prioritise higher capacity and faster speeds for the majority of the population. And given that the majority of areas where it is practical to use fibre have been connected, what technologies should be prioritised for reaching the remaining?
7. The inquiry looked at both broadband and mobile connectivity.
8. The Committee took evidence from a wide range of stakeholders. Written evidence can be found at <http://senedd.assembly.wales/mgIssueHistoryHome.aspx?Ild=16494>. The full list of oral evidence sessions and transcripts can be seen at <http://senedd.assembly.wales/mgIssueHistoryChronology.aspx?Ild=16494&Opt=2>.

02. Broadband connectivity

The current situation

Superfast Cymru

9. Generally speaking, the view from stakeholders is that the Welsh Government’s Superfast Cymru project has delivered adequately in terms of the roll-out of infrastructure, but that there have been shortcomings in the way that the project has been communicated to those in the areas where it is active. Ofcom Advisory Committee chair John Davies told the Committee:

“It (Superfast Cymru) is absolutely strategically essential for Wales. Where it has been deployed it is, reasonably well, living up to expectations. I think that it would have been extremely helpful if BT had done more marketing and stimulation to help take-up. I also think that it would have been helpful to the process for the Welsh Government and others if they had had greater responsibility for providing advance notice of where they were going to deploy, and that they were consistent in whatever they said their deployment areas were going to be.”¹

10. Broadband advice website ThinkBroadband told the Committee that “the biggest challenge seems to be convincing people that the project is delivering”.²

11. Problems with communication have been a recurrent criticism of Superfast Cymru, meaning that not enough people have the awareness required to make the most of the opportunities provided by the improved broadband infrastructure.

12. The Minister Julie James acknowledged this. She said:

“I think they’ve done a very good job in rolling it out. I don’t think they’ve done a very good job in communicating where it’s going. They’ve done a better job of communicating where it’s been, but even that, which I’m sure we’ll come on to discuss, we’re making efforts now to make sure that people actually know they’ve been connected, and I hope the committee will get on to talking about that. So, my assessment, and I’ve been very plain with BT about this, is that the project is a success: we have rolled out superfast across Wales; we are one of the best-connected countries in the world. However, the people who still don’t have it are increasingly frustrated, and we completely understand that, and their communication to those people has been poor, I think.”³ – Julie James AM, Minister for Skills

13. In May 2015 the Wales Audit Office report **Welsh Government investment in next-generation broadband infrastructure** recommended that the Welsh Government should “continue to review its marketing activities” so as to improve communication about the local rollout of next generation broadband. Similarly, the Welsh Government-commissioned SQW report **Final Evaluation**

¹ Para 3, 11 January 2017

² Written evidence

³ Para 280, 25 January 2017,

of the Next Generation Broadband Wales Programme concluded that marketing and communications “has been an area of challenge”.

14. The Fourth Assembly’s Public Accounts Committee report Welsh Government investment in next-generation broadband infrastructure (2015) concluded that the Welsh Government should work with BT, “as a priority ... improve the effectiveness of its communications strategy”.

15. In its evidence the Committee heard of some of the ways communication had been improved, including changes to the website which told people which areas were going to be connected next.

16. BT’s evidence highlighted the communications challenges posed by Superfast Cymru. It states that:

“...it is very difficult to predict availability dates for individual areas due to the number of factors which influence when infrastructure can be built. Factors include the ability to find power sources in rural areas that are cost effective, the need to apply for road closures that cannot be obtained immediately and land access. Land access is a particular challenge and time consuming to resolve.”⁴

17. The Minister’s paper states that in October 2016 the Welsh Government launched a “new multi-layered regional communications and engagement strategy to raise awareness of the broader range of benefits of superfast broadband”.

18. The Welsh Government has a £12.5 million five-year “Superfast broadband exploitation programme” to help businesses make the most of the opportunities offered by superfast broadband. This is being funded by the Welsh Government, the EU, local authorities and academic and private sources.

19. In July 2015 the Minister stated that she wanted superfast take-up to be at least 50% of those who can connect to it. In June 2017 the Minister told plenary that “the current take-up is around 35 per-cent”. In her paper she also states that the large internet service providers, with their large marketing budgets, are “likely to have the biggest influence on take-up of superfast broadband services”.

20. In their evidence to the Committee, the Chairman of the Ofcom Advisory Committee for Wales, John Davies and the representative from Think Broadband both said that both the BT and the Welsh Government should have done more marketing and demand stimulation.

21. Given that the Welsh Government’s Superfast Cymru contract with BT contains a gain-share clause, this would have been a win-win for the Government. The clause means that when Superfast Cymru take-up exceeds 20%, a proportion of the profit made by BT is placed in an investment fund which can be re-invested in Superfast Cymru or provided to the Welsh Government at a later date.

22. The independent evaluation of the Next Generation Broadband programme conducted by SQW⁵ noted that a take-up target of 50% by 2024 is insufficiently ambitious as a take up target of 60% would be more realistic within the next two years. An Analysys Mason report for BT suggested that

⁴ Written evidence

⁵ www.sqw.co.uk/insights-and-publications/evaluation-of-next-generation-broadband-wales/

superfast take-up could approach 80 per cent of all premises in the UK by 2020. These suggest the Welsh Government could have been more ambitious in its take-up targets.

23. The Committee believes that the roll out of Superfast Cymru could have been better communicated on two separate facets: Firstly there needed to be timely communications which would have enabled business customers to plan the supply of their broadband to ensure continuity to Superfast Broadband and; secondly, given the low take up figures, more could have been done by the Welsh Government and BT to raise awareness of the broader range of benefits of superfast broadband, in particular tailoring communication methods to those who might not initially recognise the benefits.

24. Given that operators have a commercial interest in persuading people to upgrade to a faster service, the Committee would encourage operators to consider how they can put together and market affordable packages which would expand take-up.

Other Welsh Government schemes

25. Alongside Superfast Cymru, the Welsh Government runs two other schemes to improve broadband availability:

- **Access Broadband Cymru:** grants of up to £800 are available where premises cannot currently access fast broadband. The Minister for Skills and Science has stated that £1.5 million will be available for ABC over the next two years, “with equivalent funding in place to extend for a further two years beyond 2018”. The Minister’s paper states that 128 offers have been approved and the installation completed since January 2016.
- **Ultrafast Connectivity Voucher:** grants of up to £10,000 are available to fund (or part-fund) the installation costs of new ultrafast connections for businesses in Wales. The Minister’s paper states that, since the scheme started in 2015 8 applications have been approved and completed, and also that a review into this scheme will be shortly undertaken.

26. The Minister states that:

“Some businesses have indicated that they do not need the speeds stipulated by the scheme, and that the cost of the leased line that accompanies the speeds is prohibitive.”⁶

27. Members report casework where businesses found it difficult to find suppliers to deliver the scheme in their area. In particular, some UCV applicants in North Wales were unable to find a Wales-based company to deliver the scheme. The committee hopes the review will result in more local companies supporting implementation of the scheme.

28. The Ofcom Wales Advisory Committee describes the Welsh Government’s other schemes for broadband as “helpful because they fund services that the market would not support”. Furthermore, it says that the schemes are helpful “because applicants are individuals and likely to consider the individual benefits to themselves of the service”.

29. However, connecting individual premises in this way they will not alone plug the remaining gaps in coverage. Spectrum Internet said that the Welsh Government could “look at a specialist loan

⁶ Written evidence.

fund which is similar to a repayable grant”. It states that this repayable funding “would be specifically made available to infrastructure providers and/or ISPs” and could be managed by “an organisation such as Finance Wales”.

30. This kind of loan fund would allow smaller providers like Spectrum Internet to connect up rural villages and repay the loan once they were receiving income from new subscribers.

31. BT states that it does not participate in the ABC, as funding can “only be used for connection and not the building of infrastructure”. It goes on to say that:

“Informal discussions have taken place between BT and Welsh Government on our participation, but it would require a major policy change on their part.”⁷

32. BT runs a scheme called Community Fibre Partnerships through which not-spot communities work with BT to define a solution. BT is currently trialling participating in the Ultrafast Connectivity Scheme.

Successor schemes

33. The Minister has announced plans for a successor scheme to Superfast Cymru, which is intended to enable the Welsh Government to fulfil its commitment in Taking Wales Forward to offer “fast reliable broadband to every property in Wales” by 2020. The Welsh Government anticipates that this successor scheme will have a public sector budget of about £80 million.

34. The Welsh Government has undertaken an Open Market Review to establish where superfast broadband has been delivered and where the market plans to invest over the next three years. The process also includes engaging with the telecoms market help shape and inform a new intervention area and procurement strategy. Any successor scheme will focus on those areas where there is no planned intervention by the market.

35. Following the Open Market Review the Welsh Government intends to launch a procurement process in September 2017.

36. Spectrum Internet told the Committee that that “the recommended speeds for Superfast Broadband are too low”, and that “we should start using symmetrical technology where upload and download speeds are the same”. It suggests that “Wireless and other enhanced copper solutions should be looked at as a last resort”.

37. Similarly, BT has told the Committee that it advocates “taking fixed fibre as far as possible ... before considering other alternative broadband technologies”. BT states that it does not have any fixed wireless technology in its BDUK (the UK-wide umbrella scheme of which Superfast Cymru is part) schemes anywhere in the UK, as it does not “see them as sustainable”.

38. BT also notes that the intervention area for the successor scheme will be scattered across Wales, and “therefore very difficult and expensive to fill”. It states that the open nature of BT’s network provides a high degree of consumer choice. Consequently, “a non BT solution, would potentially see neighbours being offered a limited monopoly retail service even though the network would have to be procured as open access”.

⁷ Written evidence.

39. Openreach has been testing “Long Reach VDSL Technology”, which allows increased broadband speeds to be achieved over copper wires in rural areas. This kind of innovation – if successfully brought to the market – could provide a solution for rural areas where homes can be a long way from the nearest cabinet.

40. However, given the difficulty and expense of reaching the remaining premises in Wales, it seems unlikely that a single-technology solution will be effective to approach anything near 100% coverage.

41. For the remaining communities, villages, business parks, homes and businesses tailored solutions will be required to ensure they offer value for money, in terms of the subsidy required, and reasonable costs for customers. These solutions also need to reflect the needs of consumers in the future. Our digital infrastructure will need to be adaptive to emerging consumer and business demands. If virtual and augmented reality headsets become mass market tools very quickly, then our current bandwidth will be insufficient. The Committee believes the Government should conduct an assessment of future needs, to ensure that investment being made now is future-proof.

Recommendation 1. Communication problems have dogged what has otherwise been a successful Superfast Cymru scheme. Some lessons appear to have been learned along the way and it is vital that any future programmes take these on board from the start. BT should continue to inform potential customers that they are able to access superfast services beyond the end of its contract. The Welsh Government should consider making communication with the public a performance requirement of any future contracts.

Recommendation 2. The Welsh Government should consider establishing a repayable grant or equity scheme to enable small operators to fill in gaps in the network. It should also explore the viability of public ownership or forming public partnerships with service providers to develop infrastructure in specific areas.

Recommendation 3. Future schemes should build on the success of Access Broadband Cymru and Ultrafast Connectivity Voucher which respond to consumer demand. By adding a repayable grant or equity scheme to its toolbox, the Welsh Government would have three means by which to support the final few thousand premises to enjoy the benefits of fast broadband access. The Welsh Government should also tailoring this scheme to make it more accessible to Small and Medium-sized Enterprises.

Recommendation 4. It is vital that the hardest to reach communities and individuals are now engaged in the process to ensure that potential solutions can be tailored to their needs. Connecting the final 4% is will be more expensive, and it is vital that communities buy in to the solutions being proposed.

Recommendation 5. The Welsh Government should conduct an assessment of future needs to inform the next stages of development. Given the cost of connecting the final 4%, which have proved beyond the reach of the market, it is vital that their connectivity is suitable not just for the present, but also for the future.

03. Mobile connectivity

The current situation

42. The Committee heard that challenges posed by the topography of Wales have hindered progress in ensuring that all areas of Wales receive the best up-to-date mobile infrastructure. Ofcom's Connected Nations⁸ report illustrated that mobile coverage in Wales lags behind other regions of the UK in a number of aspects. However, during its inquiry the Committee was pleased to note that there had been a renewed focus on enhancing mobile communications, in particular in the roll-out of 4G in rural areas.

43. Rhodri Williams of Ofcom told the Committee that as recently as 2004, the Welsh Tourist Board was using the lack of mobile coverage in remote parts of Wales as a selling point for visitors wishing to get away from the rest of the world. Today, reliable mobile networks are critical to sustain active rural economies, to make farming more competitive and to support businesses and the tourism industry.

44. Evidence provided by Mobile UK stated that mobile is increasingly being seen as the preferred platform for communications and online activity and that a "generation of 'digital natives' is shaping a world that is driven by connectivity, innovation and a focus on 'mobile first'".

45. Ofcom chief executive Sharon White has challenged Mobile Network Operators to provide 100 per cent coverage across the UK. While this report makes a series of recommendations to the Welsh Government to incentivise mobile operators, such as simplifying planning, and encouraging the use of public assets to site masts in order to ease the business case in favour of investment, the recommendations need to be implemented in tandem with Ofcom's regulatory framework in order to achieve better coverage across Wales.

46. In June 2016 the Scottish Government published its Mobile Action Plan which set out a number of objectives to maximise mobile coverage and roll out 4G across Scotland. The Scottish Government's plan covers seven key areas. The objectives of particular interest to the Committee were:

- Planning: The Scottish Government would consult on detailed legislative proposals for the further relaxation of planning controls to support commercial investment in digital connectivity.
- Non-domestic rates: From 1 April 2016, the Scottish Government has offered non-domestic rates relief for new masts in non-commercial areas.
- Public sector assets: The Scottish Government gave a commitment to engage with industry and other stakeholders to explore how there could be closer alignment between mobile industry priorities and the Scottish Government's digital priorities.
- Regulations for more innovative mobile solutions: In 2015, Scottish Futures Trust (SFT) successfully implemented a pilot project on a remote Island called Coll, in partnership with Vodafone, which delivered mobile services to the island for the first time and is testing the concept of a community-owned mobile mast. Vodafone, the core tenant, is currently delivering services to the Coll community.

⁸ Ofcom - Connected Nations

47. During the course of the Committee’s inquiry, the Minister for Skills and Science announced her intention to develop a Mobile Action Plan for Wales, along the lines of that adopted in Scotland. The Action Plan will set out how the Welsh Government intends to work with the mobile industry, Ofcom and other arms of UK Government to ensure that Wales gets the mobile coverage it requires.

48. The mobile companies (3, EE and Mobile UK) cited a range of changes they would like to see to the policies for mobile infrastructure in Wales:

- In delivering new sites, reducing capital and operating expenditures, and by amending the planning system, Welsh Government policies would better reflect the importance of digital inclusion.
- Increases in mast height and width for both existing and new masts under the Permitted Development framework. This would have the greatest impact on coverage; taller masts could double the coverage of existing mast sites.
- Business rate reform: The Welsh Government should explore whether rate relief in the most rural and isolated areas could enable improvements, which in turn would deliver significant economic and social benefits for those communities.
- Access to public assets and other landowners: encourage Government to much more to make it easier for mobile operators to access suitable locations on which to place their apparatus.

49. The Committee agrees that a reliable mobile infrastructure is central to Wales’ economic development, meeting the needs of a growing population in our cities and sustaining vibrant economies in our rural areas. However, the planning regime elsewhere in the UK is currently more favourable to the rollout of mobile infrastructure. The Electronic Communications Code, which is part of the Digital Economy Act 2017, will go some way to resolve many of the issues around access to public assets.

50. The Committee empathises with mobile service providers that the costs of deploying new infrastructure to address mobile not spots can be prohibitively high, when set against the limited profit generated in areas where there are few users. The Committee agreed with Ofcom that, although improvements have been made, coverage still falls short and that there must be better coverage across Wales.

Achieving full mobile connectivity in Wales

51. The Committee heard evidence from a range of witnesses from the industry and its regulators, Ofcom. Throughout the course of its inquiry, the Committee identified a number of its own themes for further consideration by the Welsh Government, planning authorities, the Mobile Network Operators and Ofcom.

Investment in infrastructure

52. Written evidence provided by Ofcom stated that, although mobile coverage in Wales had improved in the past year, more needed to be done to match consumers’ raising expectations:

“Some seven in ten (73 per cent) of premises in Wales can now receive an indoor voice service from all networks, up from 65 per cent last year and indoor data services are available in over half (57 per cent) of premises, up from 47 per

cent last year. In geographic terms, Wales has more voice not spots (12 per cent) than the UK (10 per cent).”⁹

53. The Committee heard that, to achieve parity with England, we will need a greater density of mobile transmitters than other countries in the UK. Rhodri Williams, Director of Ofcom Cymru, told the Committee of the scale of the problems facing the industry in Wales and that:

“...in terms of digital terrestrial television, in Wales we have 67 masts per million of the population. The number in England is 12. So it’s a huge difference. That doesn’t give you parity with England. That still only gets you, in television terms, to 97.7 compared to 98.7 in England, and that is a far lower number of masts, obviously, and that’s television that is broadcast—the signal carries long distances, and carries effectively. For mobile, and especially for mobile data services, the density of masts that is required is substantially more.”¹⁰

54. Rhodri Williams added that in order to get parity with England, whatever is done in England needs to be done to a greater degree in Wales.

55. In Plenary on 2 November 2016, the Minister for Skills and Science said that “I’m not all that certain that the people who live in our national parks really want a 250 foot mast every 10m in order to get mobile connectivity. So, clearly, there’s a trade-off between what you want to get and what you have to have in order to get it”.

56. Written evidence provided by the Ofcom Wales Advisory Committee stated that the topography and population density of Wales hampers commercial coverage:

“The economics could be changed by permitting companies to have masts of 100m+ and not charging rates and making available sites and wayleaves for the backhaul free on public land. Such changes would not provide universal coverage but would help. A subsidy is probably necessary for coverage in areas which are still uncommercial.”¹¹

57. The Committee agreed that more could be done to explore public subsidy to improve mobile coverage in areas which remain commercially unviable. In particular, where landowners are already in receipt of public subsidies, it seems strange that they could refuse to allow mobile operators access to their land to maintain and construct mobile masts.

Recommendation 6. The Welsh Government should consider making future public subsidy conditional on supporting government policy to improve digital infrastructure and to ensure that it meets the needs of consumers in the future, in particular any likely convergence between broadband and mobile internet connectivity.

Collaboration

58. In responding to the Committee’s consultation, telecommunications provider Three stated that:

⁹ Written evidence

¹⁰ Para 162, 11 January 2017

¹¹ Written evidence

“Digital connectivity remains vital to consumers and businesses across Wales; it is essential that policymakers and industry work together to ensure the best possible coverage and quality of service.”¹²

59. Written evidence provided by Mobile UK stated that there will need to be partnerships between private and public sector bodies, to develop schemes “...where there is no commercial business case but where additional societal gains can accrue from wider coverage (for example, in the efficient delivery of public services)”.

60. They also stated that “although commercial network development will reach a significant portion of the landmass of Wales, there will be scope for partnership between state and the private sector to cover the most hard to reach areas”.

61. In emphasising the importance of co-ordination across Governments, they stated that “While competition among private actors will be the primary driver of innovation and change, the Government at Westminster and all Governments of the nations can make a significant contribution”. Mobile UK agreed with the National Infrastructure Commission, that in meeting these challenges, “strong leadership and coordinated action across the machinery of Government” would be needed.

Planning

62. The Committee heard that there were some international examples similar to Wales’ topography and population distribution where public policy intervention had resulted in a significant improvement to mobile connectivity. John Davies, Chair of the Ofcom Advisory Committee told the Committee that Sweden, which has a complex topography and low-density population was an example of good practice and has “taken a stance on their mobile networks with very tall masts that have enabled them to provide coverage to places that would have been very expensive on a fixed line basis”.

63. Referring to the English Planning Framework, Huw Saunders, Director of Telecommunications and Networks, Ofcom told the Committee that “...there are specific changes in terms of mast height that are in train, which are part of a package that were associated with the Digital Economy Bill”.

64. During the course of the Committee’s inquiry, a number of priorities were outlined by Mobile Networks Operators to meet consumers’ aspirations contains a number of priorities to address issues around the existing planning regime. Huw Saunders told the Committee that:

“They [Mobile Network Operators] are identifying a number of things—more masts, higher masts. There is a variety of things that are going to be necessary to meet that consumer aspiration. But I think there’s a key issue underpinning that, which is attitudinal. Whether it’s the attitude of the planning authorities, whether it’s the attitudes of people themselves, the reality is that if they want to get something close to universal mobile coverage, there will need to be changes in attitudes.”¹³

65. The Committee acknowledge that a major hurdle for operators to overcome would be to manage the expectations of customers in the not-spot areas. It is clear to the Committee that the

¹² Written evidence

¹³ Para 159, 11 January 2017

Welsh Government needs to work more closely with planning authorities and the MNOs to engage with communities to promote the benefits of improved connectivity and the potential for economic benefits for landowners and local businesses.

66. In addition to exploring public subsidy to improve mobile coverage, the Committee agree that authorities should explore the feasibility of only awarding planning consent to operators who would be willing, in principle, to share use of their infrastructure with other MNOs to enhance coverage in not-spot areas.

Innovation

67. Data published in Ofcom’s Communications Market report 2016: Wales¹⁴ shows that while mobile availability in Wales has improved greatly, it remains the lowest in the UK. The following table summarises the mobile coverage across the UK:

Table: Summary of outdoor mobile coverage for all four operators in the UK

Technology	Percentage of premises covered				
	Scotland	England	Wales	Northern Ireland	UK
2G	92.0	94.6	83.2	87.4	93.6
3G	85.6	94.4	74.9	88.6	92.5
4G	58.4	74.7	43.9	59.9	71.3

Source: Table compiled from data in Ofcom Communications Market Report 2016: Wales

68. In December 2014, the UK Government signed a binding agreement with the four Mobile network Operators (MNOs) to improve mobile coverage. This was aimed, in particular, at reducing ‘partial not spots’, where coverage is provided by some but not all mobile operators. This agreement guarantees coverage of a mobile voice and text service from each operator to 90% of the UK’s land mass by 2017.

69. Written evidence provided by CLA Cymru stated that innovation is needed to improve mobile coverage and that the Welsh Government must “ensure that properties in the remotest areas of rural Wales are not left behind in the future roll-out of the new technology”.

70. The Committee heard that there were innovative examples of community solutions to poor mobile connectivity. Ger-y-Gors Projects established a not-for-profit community-based company that has successfully built a mast for mobile phone and broadband connectivity in its locality. The project accessed grants through the Welsh Government and the European Agricultural Fund to build infrastructure to support a 25 metre mast meeting the full specification of mobile operators.

71. The Committee agreed that this could be used as a model for other rural economies and that the Welsh Government could use the lessons learned from this project to develop a toolkit which would give rural communities more autonomy to install mobile infrastructure to meet their specific

¹⁴ Ofcom – The Communications Market Report 2016: Wales

needs. The Committee agreed that the benefits of a community approach need to be given a larger profile and promoted to rural economies experiencing similar problems with connectivity.

72. Wales' topography and population distribution pose significant challenges to providing equal mobile connectivity across Wales. With its hills, valleys and remote communities, the Committee acknowledge that it would be difficult for the Welsh Government to follow good practice adopted by other countries. However, the Committee agreed that there should be scope for investment in more innovative bespoke solutions to address the specific problems with the mobile network in Wales. In particular, the Committee agreed that existing public infrastructure could be used to site masts for wider coverage.

73. The Committee is aware of the sensitivities around the implementation of taller, more prominent telephone masts, in particular in areas of natural beauty. The Welsh Government should be more creative in how to ensure maximum coverage with the minimum number of masts. In other areas – particularly in Wales' valleys – topography may dictate that the need is for a greater density of shorter masts, rather than fewer taller masts.

Connectivity on the transport network

74. Mobile UK identified the need for improved coverage on our roads and railways. Their written evidence emphasised that "the closer the antenna is to the highway, the easier it is to maximise coverage by shaping the signal to where it is needed".

75. The Committee's recent reports on the Rail Franchise and Metro, and Taming the Traffic: the impact of traffic congestion on bus services, noted that passengers increasingly expect to be connected while travelling.

Public ownership of a mobile network

76. At its meeting on 11 January 2017, the Committee questioned witnesses on whether there was scope for a model of single shareholder public ownership of the mobile network. The Committee heard that there were mixed examples of successful publicly owned services across the world. However, the Committee agreed that further research would be required before committing to this.

Recommendation 7. The Welsh Government, considering local topography, should reform the planning regime to support investment in digital connectivity, in particular to allow the installation of masts that cover a wider geographical range. In turn, the Welsh Government should work with operators and planning authorities to ensure that plans are clearly communicated to the affected communities and that the key benefits of mobile connectivity are actively promoted.

Recommendation 8. While the Welsh Government does not have the power to compel mobile operating companies to share their infrastructure, it should explore the feasibility of using the planning regime to encourage operators to share infrastructure to ensure a range of coverage in current not spot areas.

Recommendation 9. The Welsh Government should work with Mobile Network Operators and Ofcom to consider whether offering non-domestic rates relief for new masts in non-commercial areas would have a significant impact on investment.

Recommendation 10. The Welsh Government's forthcoming Mobile Action Plan should include firm commitments to work closely with stakeholders, in particular to:

- collaborate with local Government, UK Government, regulators and the industry to develop mobile infrastructure making the most of existing infrastructure and publicly owned assets where possible;
- collaborate with stakeholders from across the industry to ensure that Mobile Network Operators share coverage in not-spot areas; and,
- collaborate with local authorities and landowners to ensure that Mobile Network Operators can have access to publicly funded assets to install masts and other apparatus and to explore the benefits of mast sharing with the emergency communication system in rural not-spots.

Recommendation 11. Ofcom needs to use all its regulatory powers to ensure that it meets its target of 100 per cent geographical coverage. At a minimum, this should be a condition of future spectrum auctions.

Recommendation 12. The Welsh Government and planning authorities should provide a tool kit with clear business and grant application advice to communities who wish to access public funds to create their own solutions to enhance mobile connectivity in their area. Examples of good practice should also be promoted in rural areas where connectivity is problematic.