

NFU Consultation Response: The Future Telecoms Infrastructure Review Call for Evidence

To: FTIR@culture.gov.uk

Date: 30th January 2018

Ref: NFU/Policy/Telecoms1

Contact: [REDACTED]

NFU summary response to the Call for Evidence

The NFU represents 55,000 farm businesses in England and Wales. In addition we have 55,000 countryside members with an interest in farming and the country. We welcome the opportunity to contribute to this review and to work with those stakeholders who will deliver world class services for farming and rural communities.

Evidence from NFU members and from our 2017 member Broadband and Mobile Survey will set out the extent of the challenges and opportunities that the telecommunications market could address. We believe the likelihood is the Government will need to intervene to address market failure, not just for farmers, but more widely for the wider public good. We all need access to effective communications wherever we are.

We urge the Government to use this review to introduce measures to deliver:

- Short term market interventions to **increase fibre broadband coverage and full 4G coverage, at a cost and reliability of service** that works for all, but especially for rural areas, and is future proofed for increased business and service needs.
- To incentivise those who seek to deliver world class services to the most remote businesses, using **a variety of technologies** that support agri-tech uses and promote wider service delivery.
- To ensure the market is ready to deliver the next generation of mobile technologies including comprehensive rural **5G coverage**.

Why the telecommunications market needs to deliver for farming

The NFU has called on the Government to make the “digital economy universal” so that every farming business can access superfast broadband at speeds they can afford and use mobile technology across the farm. The NFU has asked the Government to lay the foundations for fifth generation (5G) technology and to allow the full delivery of the Government’s agri-tech and Industrial Strategies.

Farmers and growers are an essential part of the UK economy, supporting a food and drink sector collectively worth £112 billion and employing 3.9 million people in 2017. Farmers provide further support to the economy by providing energy and rural services. Over one third of NFU members host renewable energy, with 64% of farmers overall host diversified activities in 2017, up 2% from the previous year. The wider economy therefore benefits from wider farming connectivity.

NFU members maintain 70% of the UK land area and hence have a pivotal role in hosting telecommunications equipment in rural areas. They know and understand the rural environment into which infrastructure will need to be delivered, which many people work, live in and visit. Digital connectivity can help promote a healthier and safer environment for all, but needs to fit for purpose.

Farm businesses are facing challenges and opportunities, which can be focused on increasing productivity, managing the environment and mitigating price volatility. Trade with other countries, both within and increasingly outside the EU will be vital and they will expect our digital communications to be comparable and fit for purpose to compete in this global market.

NFU Consultation Response: The Future Telecoms Infrastructure Review Call for Evidence

Such is the breadth of potential market intervention considered by this Call for Evidence that the NFU cannot answer all the suggested questions. Instead, to support our recommendations, we have focused on the importance of the following key issues for farming and wider rural connectivity.

- **Governance:** The importance of government leadership
- **Accountancy:** Ensuring the true cost of infrastructure delivery is properly assessed.
- **Data:** Starting from an accurate evidence base of rural connectivity in 2017.
- **Investment:** How incentives in investment for rural areas can ensure the farming sector can compete internationally.
- **Land management:** The need to deliver rural infrastructure most effectively.
- **Future spectrum allocations:** The need to increase connectivity and ensure farming and rural solutions are not compromised.
- **Wider infrastructure provision:** How Government can improve connectivity when delivering major infrastructure projects and local infrastructure provision.

The importance of government leadership

The NFU welcomes the fact that the Government has acknowledged the need for change in the way telecommunications are delivered.

The NFU believe that strong Government leadership can make a difference. When we look to international examples from China and South Korea, where there are national commitments and targeted regional examples from German and American states, we can see how their national and regional governments are leading the ambition.

Government funding, regulation and targets can set the standard and provide confidence for investment. Where the UK could have an advantage is through its leadership in research and technology and entrepreneurial spirit, this must be incentivised to ensure fair competition.

Overcoming barriers to telecommunications monopolies and incentivising a competitive rural market must now come to the fore of Government if the farming economy is to catch up and excel.

In the introduction to this Call for Evidence the Secretary of State for Digital, Media and Sport emphasised the need to get the market structure for the telecommunications industry right **now**, to deliver national coverage of 4G and to be a world leader in the deployment of 5G mobile connectivity. The NFU welcomes this commitment. For NFU members a choice of reliable and competitively priced digital connections has to be available for them to reduce their costs and enable them to boost food production, environmental stewardship and to support the wider rural economy.

The Secretary of State for Environment, Food and Rural Affairs, the Rt. Hon Michael Gove MP, also highlighted the role of infrastructure in future farming when he outlined his vision on the future of our farming industry at the Oxford Farming Conference 2018.

“Critical to making this new investment in tech and skills work is of course proper infrastructure - super-fast broadband and reliable 5G coverage. If I can get reliable and unbroken mobile phone and internet coverage in a tunnel under the Atlantic as I travel between one Faeroe Island and the next I should be able to get it in Oxfordshire. So I am delighted that my colleague Matt Hancock has made it a priority to ensure rural areas get the digital infrastructure they need and I will do whatever I can to help”.

The Secretary of State for Environment, Food and Rural Affairs, the Rt. Hon Michael Gove MP January 2018

NFU Consultation Response: The Future Telecoms Infrastructure Review Call for Evidence

Ensuring the true cost of infrastructure delivery is properly assessed.

The NFU recommends that this reviews assesses not just costs to the telecommunications industry, but also productivity losses resulting from businesses which do not having future proofed infrastructure, including loss of trade, the ability to innovate and compliance with regulation. We would emphasise that any assessment of costs also need to be balanced against the potential cost savings of effective public services, public goods such education and health and access to a safe and connected countryside and the ability to adapt to climate change (increased flood and drought events).

The NFU believe this review has assesses the **true cost to businesses, the consumer and the public purse** that will result if the telecommunications industry does not want to meet this challenge voluntarily. This assessment will assist in determining how the Government then needs to regulate to ensure the country has the telecommunications infrastructure it needs.

One example is the need to complete fully reliable mobile phone coverage, and for voice and data services. To provide more robust 4G services and coverage and to ultimately deliver 5G services that could revolutionise data collection and sharing for farmers. The NFU evidence is that:

98% of farmer's own a mobile phone. Of those, 93% feel that having access to a reliable mobile signal is important for their business. However, only 16% reported that they could receive a reliable mobile phone signal in all indoor locations and only 15% for outdoor locations on farm (NFU survey evidence 2017).

Whilst this statistic may be shocking it also raises wider practical issues and wider costs both for farming and society as a whole. For example there are real life health and safety issues that can be addressed by improving mobile phone coverage and which need to be factored into any cost assessment. 30 deaths and 13,000 injuries were reported to the Health and Safety Executive for farming related activities alone in the financial year 2016/17.

The NFU cannot provide figures for deaths and accidents in the wider countryside, but it understands there are growing service challenges in supporting an increasingly isolated and aged population, which 5G technology could also revolutionise, as well as the need to provide coverage for those who choose to live and visit the countryside.

The importance of tackling mental health for example has also become a Government priority, as it is reportedly costs the National Health Service and society as a whole [£105 billion a year](#). The 25 year Environment Plan has promoted how the countryside can have a key role to in assisting our wider wellbeing, but to do so it has to be a safe and connected place.

The Digital Strategy can help establish rural priorities digital connectivity, but a focus on rural first in investment, decision making and barrier removal is also essential.

“Something has to change. If it doesn't, farms will continue to incur costs, decide against diversification, adjoining sectors will miss out on the opportunities agricultural business can provide in tourism, local food manufacture, children's nurseries and shops.

It must also not be underestimated the impact that lack of communication methods and the removal of the ability to run a successful business can have upon one's mental health, especially in an already stressful environment, another cost to the NHS and local support services they can ill afford.”

NFU Member responding to this Call For Evidence.

The voice of British farming

Although every effort has been made to ensure accuracy, neither the NFU nor the author can accept liability for errors and or omissions. © NFU

NFU supported by



NFU Consultation Response: The Future Telecoms Infrastructure Review Call for Evidence

"I have spent 2.5 hours trying to access our bank's website to set up a new account, but the internet keeps dropping out so I have wasted my time. A 15 minute job has cost my entire morning and I have still not managed to finish. Our bottom line and business success is ENTIRELY dependent on good quality dependable broadband. Who knows where we will be if we don't see an improvement."

NFU Member responding to this Call For Evidence.

The review has to build on actual connectivity standards in 2017.

Accurate reporting of actual mobile and broadband connectivity is essential to understanding the challenges for digital connectivity and who is best placed to deliver services.

The NFU has been campaigning for all farmers to have superfast broadband and mobile phone coverage, based on farmer's own evidence of actual coverage measured over 3 years since 2015 and for accurate coverage standards. The NFU survey has been undertaken to fill a gap in data collection and to establish an accurate starting point from which to understand both market failure in the delivery of digital infrastructure on farm and the need for intervention.

In summer 2017 only 9% of member's surveyed could confirm they received download broadband speeds of 24Mbps or more; for 50% of members this was 2Mbps or less.

Only 15% had a reliable mobile signal across the farm¹. We believe the Government now has the opportunity to act to deliver world class connectivity to all and address this market failure.

NFU farmer and growers members operate in markets where there is active competition and collaboration between many thousands of businesses, both locally and internationally. This opportunity for healthy competition often does not exist for fixed broadband and mobile phone provision in rural areas, where monopolies can push up costs and operators can refuse to provide services or focus on one model of mobile provision, such as a single type of mast or delivery model regardless of the location.

What we can emphasise is the importance of getting an effective rural market in place. 97% of NFU members surveyed in 2017 had access to the internet; of those 91% believe that broadband is an essential tool for their business although the majority (59%) felt that the broadband speed they were able to receive was insufficient. Once farmers receive superfast broadband the evidence is that their usage and the importance of the service for their business increases. However some members reported paying for superfast services, but then not receiving the speeds they pay for. This is a major barrier to improving productivity.

¹The NFU survey is based on 866 members responding to a random telephone survey or online survey in August/Sept 2017 and providing their actual coverage experience. The NFU survey is a unique farmer survey capturing data not collected by others and hence provides a more complete picture of rural coverage, for example many farmers fall within postcodes with less than 4 broadband lines, such geographical areas not reported on by Ofcom for data protection reasons. Please read more about our survey in appendix 1 of this report.

NFU Consultation Response: The Future Telecoms Infrastructure Review Call for Evidence

The review needs to introduce incentives in investment for rural areas and ensure the farming sector can compete internationally.

Broadband

A farm business is typically down a private land, in a sparse rural location or on the edge of a village or urban area, regardless of the region within it is located; as a consequence fibre broadband may not have been offered or may be costed at thousands of pounds. **The NFU survey asked farmers who had a standard internet connection, whether they had been offered superfast broadband. 83% confirmed that they had not.**

“Our broadband is delivered from the exchange less than 500 meters away from our farm and home, however, availability of the service is limited, irregular, unpredictable and most certainly slow. A fibre optic cable runs within a meter of the farm gate, but has never been connected, despite many, many requests.

We are unable to carry out many legally required duties when needed, make payments, file VAT. Meetings are arranged and have to be rearranged because the internet isn't working so work can't be carried out, at a cost to the business. We are unable to share information on a day to day basis with the various contractors on site, search for valuable information on growing crops, varieties, machinery recommendations, many factors which would increase the profitability and success of our enterprise and quality of our product. Agronomists are unable to update systems remotely for fear of us not being able to access it, trips to our farm in turn cost both our businesses.”

NFU member responding to this Call for Evidence.

Only 1% of farmers surveyed had access to a community broadband scheme, which outlines the potential for this to be incentivised. The NFU only has anecdotal evidence about how the market reacts to such schemes, but members have reported that some major operators would only offer their services after alternative providers or community groups had invested in infrastructure in their areas. Therefore an assessment also needs to be made of how fair competition can occur.

In [Scotland](#) and the Republic of Ireland the Governments have committed to superfast connections to all properties using next generation technologies. The [European Commission](#) also has targets for universal superfast broadband coverage by 2020 (measured at 30Mbps) and 100 Mbps coverage to all European households by 2025, with the aim of making Wi-Fi connectivity ‘as ubiquitous as water delivery’. It has established the Connect Europe Broadband Scheme, which is intended to be the first step towards a ‘gigabit society for all’. The initiative includes a [toolkit for rural broadband](#). The [Connecting Europe Broadband Fund](#) has been established to assist access to finance. The [Rural Development Programme : Rural Broadband Infrastructure Grant](#) is a £30 million scheme which may provide assistance to some farm businesses, but is not designed to address the remote farm or rural property model, where there has been the most market failure in broadband delivery.

The NFU welcomed of extension of the [better broadband subsidy scheme](#) which could offer up to £350 off a connection when a home or business can receive broadband speed of less than 2Mbps. We believe such a scheme could have more of an impact if it offered a more realistic contribution of meeting the current costs of superfast connection.

NFU Consultation Response: The Future Telecoms Infrastructure Review Call for Evidence

The Digital Economy Bill also legislated for a **broadband Universal Service Obligation (USO)**. The NFU believes a broadband USO could be a useful tool, **if it were appropriately designed** to promote equality in infrastructure provision. It could be an opportunity for the Government to demonstrate that it values rural as well as urban communities and is seeking to provide quality broadband services for all. Critical points highlighted by the NFU in its response to the summer 2017 Government consultation were:

- The proposal could **distort the developing rural superfast broadband market**. As proposed it would target the easiest to reach properties beyond the government-funded Superfast Broadband Programme, and fix them in 10mbps contracts. This represents a second class service and one that is not future-proofed, potentially limiting farmers in their ability to access productivity enhancing technologies and equipment. It is not equitable or comparable to what urban consumers are being provided with using Government funds.
- The broadband USO should form one part of an **integrated approach** that ensures all farmers and rural communities can take full advantage of the opportunities a digital economy can deliver.
- The NFU is concerned that that proposed consultation design of the USO designed could **exclude the most difficult to reach businesses and families**, which are often remotely located or at the edge of urban areas. The USO must be targeted at these very properties to ensure 'no-one is left behind'. This is what consumers would expect, given the spirit of the Government's announcement. We have serious concerns that thousands of properties, many of them farms, could be ineligible due to the Government's preferred choice of design.
- The NFU wishes to see **4G, fixed fibre, satellite and other emerging technologies** also on offer for those properties that will be excluded from the USO (under the current proposals).
- The NFU believes any **USO should be costed to reflect actual broadband delivery costs**. The reasonable cost threshold will deliberately leave the most remote properties (and most expensive to connect) uncovered, unless additional funding resource is provided. The fact these properties could have to pay more money to receive services of 10mbps or less is not acceptable.
- Farming and other rural businesses increasingly rely on the internet for trading and running their businesses. The proposed design of the service **does not adequately assess the economic and social impacts of delivering broadband**, which places reliance on the internet for businesses and consumer services. This includes the fact that all government services and regulations are expected to be undertaken online. There is insufficient assessment of how rural services will be provided in the future for the rural population and farming families.

Just to let you know of the poor internet connection we get here via phone-line. About 5 years ago I gave up on phone-line broadband – any photos/ pictures/ large documents took ages to send/receive – I rarely had a connection speed of 1MB. The computer would crash/freeze, and it was difficult to know how much of the document had been transmitted.

*I then tried satellite – very expensive to install, and ridiculously expensive to run, particularly if the monthly package was exceeded, which was becoming very frequently. In 2016, I swapped to 4G – again expensive to run, and most annoying when the monthly package has run-out, as top-up can only be bought AFTER it has run-out. Trying to run 2 businesses (Farm and Holiday Cottages) in the 21st century is challenging enough without the extra hassle of poor broadband facilities.
NFU Member responding to this Call For Evidence.*

Mobile signal has been much improved over the last year or so with much of the farm receiving 3G or 4G signal although indoors is poor but I'm assuming that could be because of the thick stone walls.

As for the broadband, we have nothing, no broadband available whatsoever let alone fibre broadband. We are forced to use a mobile broadband dongle which in this day in age where we are expected to

The voice of British farming

Although every effort has been made to ensure accuracy, neither the NFU nor the author can accept liability for errors and or omissions. © NFU

NFU supported by



NFU Consultation Response: The Future Telecoms Infrastructure Review Call for Evidence

use the internet for BCMS, RPA etc. as well as emails and other communication, is unbelievable.

NFU Member responding to this Call For Evidence

Mobile

Mobile coverage is particularly important for farmers, who need to be connected across fields and farm buildings. Only 15% of farmers had complete mobile coverage across a farm in all the last three years we have surveyed (2015, 2016 and 2017) the only question the NFU asked where there has been no service improvement.

It is rare to find a farmer who has not had better coverage when abroad and NFU members report being able to access a far superior 4G system outside the UK. One, for example, uses 4G to open and shut glasshouse windows in Australia.

The telecommunications industry has been incentivised in the past, but the Mobile Infrastructure Project delivered only 70 masts out of an original target of 600 when the programme closed in 2016, despite offering to meet the capital costs of establishing new mobile infrastructure sites.

It is vital that the results of the voluntary commitment by the mobile companies to provide 90% voice coverage by the end of 2017 is published and there is a better understanding of how robust the EE emergency services contract will be for providing commercial services, including making emergency phone calls to wider farm and rural support in remote locations.

Even if potentially 95% coverage targets are achieved there will continue to be not-spots across the country, unless additional measures are introduced such as dual SIM phones or for the industries to share their networks and install more infrastructure.

The need for the telecommunications industry to deliver infrastructure more effectively.

Most farmer and tenant farmer requirements can typically be summarised as ensuring they can farm and meet their regulatory commitments and providing them with a fair land deal, which future telecommunications providers will also adhere to.

Where this does not happen more competition in who provides the infrastructure and more information sharing about the regulations, constraints and opportunities for accommodating infrastructure provision would be greatly beneficial.

NFU member experience is that those telecommunication operators, who are attuned to agricultural matters when it comes to site acquisition and negotiation, get faster land access deals and deliver more efficiently on site. Many site providers have genuine preferences as to access routes, times and locations. Early negotiations about business and environmental constraints can help deliver practical, future proofed sites, which can also help infrastructure development progress through the planning system.

Since the introduction of the new Electronic Communications Code, some operators appear to have misinterpreted certain provisions relating to valuation and the rights to site share and upgrade apparatus often drawing comparison with compulsory purchase and unfettered rights. This does not encourage landowners to accommodate sites. Some landowners can also be put off by poorly drafted agreements.

If one site provider cannot do a deal, others, including community groups, should have the opportunity to provide the infrastructure instead. Other infrastructure providers should also be incentivised to

The voice of British farming

Although every effort has been made to ensure accuracy, neither the NFU nor the author can accept liability for errors and or omissions. © NFU

NFU supported by



NFU Consultation Response: The Future Telecoms Infrastructure Review Call for Evidence

provide services for farms and rural communities, such as renewable energy providers and other companies wanting to lease land and erect buildings that also need rural connections.

Wider rural networks should also be incentivised to develop and share their own infrastructure where it meets their farming needs, including having town planning powers to erect digital equipment for farming and rural business use.

National and local government could also assist by making its own infrastructure available for use and ensuring broadband providers also get the opportunity to install their infrastructure when there are other utilities being upgraded in the area.

“We cannot get the telecommunication company who own the mast on our land to the negotiation table, the lease expired last year and current legislation allows them to carry on regardless as we cannot get them out, cannot get rent and have the choice of throw money through legal costs or at some point accept their 50% reduction in terms demand.”

NFU member responding to this Call for Evidence

“The fact is we were happy to do what we could to help our neighbours get the broadband they wanted, and so we offered routes through our land and yard to help the company concerned, and to avoid the visual impact on our higher level agri-environment scheme farm to ourselves, visitors, local residents and the public.

We feel that Communications companies should be required by law to be fair to landowners. Why should we shoulder additional costs and problems and blots on the landscape for a company who stands to make money out of this. We too are businesses. At the moment we have no rights.”

NFU member responding to this Call for Evidence

Future spectrum allocations need to increase connectivity and protect farm uses.

The Government also needs to ensure future spectrum is used to provide rural solutions, to enable 5G challenges and wider technological use and support important farming practices.

Farmers are already using radio communications, for example, for machine to machine information transfer, warning alerts and the use of GPS phones and walkie-talkies. Mesh style communication systems will increasingly be used for whole farm connectivity and These will be needed to complement where mobile and fixed broadband technology cannot provide solutions and to work alongside such technologies for wider business support.

In 2017 98% of farmers owned a mobile phone, 93% responded to the 2017 NFU survey to confirm that having access to a reliable mobile signal is important for their business.

4G use is currently a default for many farmers, 80% of those with smartphones use 4G, but current systems have data and cost limitations. Access to a strong signal across farm, which can also support the use of repeaters, could make a real difference offers the potential to make a difference across all farm sectors, particularly if it can be used to control or monitor farm machinery and buildings and track and send data from animal IED tags.

NFU Consultation Response: The Future Telecoms Infrastructure Review Call for Evidence

Farms will also need to maintain their own business networks and access data swiftly. Today the Rural Payment Agency (RPA) may send a text to a farmer, but it may be hours before he or she receives it. Compliance documents take hours to download and animal movements are delayed.

*"5G is needed to make the most of agri-technology.
If you watch Kit Franklin's presentation to the Oxford Farming Conference this year.....you will see a very bright lad with a good idea of how farming can embrace robot operation at much lower cost than that presently available through the current channels. It uses the much cheaper drone technology and for his Hands Free Hectare he was able to use Wi Fi because it was just within rangebut as he said in his talk anything bigger and I need 5G .
So do we all !!! I operate as a farm advisor over the South West of England and some of my farms have virtually no Wi Fi and have to drive ,sometimes many miles to fill up forms on line and many have very limited mobile phone coverage.
This is/definitely will, hold back our industry from being able to take up all the new developments /technology/robotic thinking and will once again advantage the large and prosperous businesses who can afford different approaches, whilst severely disadvantaging the smaller/family businesses who in most cases are NO LESS willing/wanting to move forward. If 5G were available then Wi Fi coverage would not be needed and this might be simpler all round"*

NFU member responding to this Call for Evidence

Quite often we hear about industry disputes and challenges that delay the introduction of new legislation or spectrum by Ofcom. We do not seek to comment on such issues, but welcome the fact that this consultation opens up the opportunity for this to be assessed more widely and solutions found that are in the public interest.

How Government can improve connectivity when delivering major infrastructure

The Government could act to ensure the opportunities for large infrastructure projects have wider local benefit and provide opportunities for greater connectivity for landowners and telecommunications companies seeking to provide local infrastructure. We are concerned that projects such as HS2 rejected landowner requests to provide ducts to link farm land on either side of the track. This seems like a missed opportunity to future proof infrastructure and rural communities.

Where infrastructure can be installed under public infrastructure, this can be preferable to installation on poles, which require more maintenance for the telecommunications company and the adjacent farmer. The NFU has long called for the regulators to work closer together to help coordinate and create the market conditions for infrastructure sharing.