Cabinet Secretary for Finance and Economy
Kate Forbes MSP

T: 0300 244 4000
E: scottish.ministers@gov.scot

Ofcom:
Mobile Strategy Team
Mobile Spectrum Demand Team

By email: mobilestrategy@ofcom.org.uk;
MobileSpectrumDemand@ofcom.org.uk

05 April 2022

DISCUSSION PAPERS:
OFCOM'S FUTURE APPROACH TO MOBILE MARKETS
MEETING FUTURE DEMAND FOR MOBILE DATA

I welcome the opportunity to respond to Ofcom's two mobile discussion papers: Ofcom's future approach to mobile markets, and Meeting future demand for mobile data. This response is a combined response to both papers, and covers my own portfolio interests – but specifically, in relation to digital connectivity. This response has been written with the input of the Scottish Futures Trust, The Scotland 5G Centre and advisory support to the Scottish Government.

A detailed list of points for Ofcom's consideration can be found in Annex A, but I would also like to take this opportunity to reiterate a few points made in the Scottish Government's response of 11 February 2022 to Ofcom's 2022/23 workplan, which are also relevant in the context of these discussion papers.

A green and resilient economic recovery from the impacts of COVID-19 will only be possible if future-proofed, high-quality digital infrastructure and services are available right across Scotland. The Scottish Government's recognition of the importance of digital infrastructure – both fixed and mobile – is also reflected in our National Strategy for Economic Transformation[1], published on 1 March 2022. The Scottish Government has funded, developed – and is delivering – programmes that will provide improved connectivity, despite relevant legislative and regulatory powers being reserved to the UK Government. However, the work of Ofcom in delivering an effective and efficient underpinning regulatory regime is also key.

We welcome Ofcom's commitment to delivering a regulatory framework that more clearly aligns national regulation with needs at a regional level and to reflect the needs of devolved nations, and it is ever more important that the regulatory regime is able to respond in an

INVESTORS IN PEOPLE™
We invest in people Silver

disability confident LEADER

agile manner to any challenges that may arise. Whilst we welcome the overall ambition of Ofcom's future mobile and spectrum strategies, we stress that Ofcom's approach must serve to facilitate the delivery of improvements to all of Scotland – in particular, rural, remote and island communities – and, accordingly, consider the appropriateness of regulation at a more granular level than in the past.

I welcome an ongoing discussion with Ofcom on this matter and my officials in Scottish Government's Digital Directorate look forward to continuing collaboration as Ofcom refines its approach to mobile and spectrum regulation.

Yours sincerely

KATE FORBES

INVESTORS IN PE♥PLE™
We invest in people Silver

disability confident LEADER

1. The Scottish Government believes that Ofcom's current approach to mobile regulation risks the continuing likelihood of market failure in rural and remote areas if ongoing commercial mobile and fixed rollout – and government measures – fail to deliver sufficient connectivity in all parts of Scotland.

   Whilst we welcome various UK Government and Ofcom interventions such as the Shared Rural Network (SRN) commitments on coverage uplift, we consider that more targeted measures may additionally be needed. By 2027, SRN commitments from UK mobile network operators (MNOs) are expected to deliver geographic coverage in Scotland of 91% (from at least one MNO) compared to 95% for the UK. Whilst this coverage improvement for Scotland is welcomed, the scope of SRN is currently only limited to 4G – and a gap in mobile coverage will remain. As a result, we have concerns about the feasibility of delivering connectivity to all of Scotland. A continuing competition-based approach to delivery of mobile coverage also gives rise to concern, given that in rural and remote areas economics will often not warrant investment from private operators (e.g. if the cost of fibre or mobile infrastructure rollout is prohibitive, giving little or no commercial upside for investors in these areas).

   The Scottish Government asks that Ofcom explores as a strategic priority what else can be done from a mobile perspective to help bridge the remaining connectivity gap for very hard to reach areas which will not benefit from SRN.

   When exploring solutions, we urge Ofcom to consider prioritising the need for a minimum level of connectivity throughout the UK if we are to avoid widening the digital divide. Various options could include: further mobile coverage commitments on MNOs, ensuring improved local access to mobile spectrum, and exploring the connectivity benefits of alternative technologies such as satellite or fixed wireless access.

2. To guard against the risk of a wider digital divide, the Scottish Government believes that more emphasis is needed on ensuring connectivity for all. As mentioned above, current national spectrum policy and the emphasis on a market-driven approach by competition is leading to coverage gaps for some.

   The Scottish Government asks Ofcom to consider changing its emphasis to ensuring connectivity for all. This could, for example, include measures to adopt a more regional-based approach to regulation to ensure connectivity for hard-to-reach areas. The Scottish Government notes that fixed-line regulation already works with sub-regional markets and asks that Ofcom considers what is possible to address current connectivity challenges in the mobile space. It is clear that current competition-based, market-driven activity insufficient to ensure a minimum level of connectivity, so more action is needed for these specific geographies.

   The Scottish Government is already focused on tackling geographies and believes more could be done to help. For example, our National Islands Plan[2] provides a framework for action to meaningfully improve outcomes for island communities. As part of this, we recognise the potential role of Ofcom in helping address the issues faced by island communities when designing telecoms regulation and policy – working to explore how

---

regulatory levers (such as spectrum auctions) could improve both mobile and broadband coverage on the islands and ensure that the needs of islands are represented to the DCMS in UK national policy development. As part of this work, we are clear that connectivity comprises both broadband and mobile. Providing access to 4G and other technologies is equally as important in order to provide the most appropriate solution for each area.

3. The Scottish Government believes that Ofcom's current approach to local and shared access licensing could be improved. While the theoretical benefits of shared and local access licences (SAL and LAL) are clear, improvements are needed as we are aware that several frustrations exist. There has been little uptake of SALs and LALs to date. Moreover, we have received representation indicating that SALs and LALs are not easy to obtain given that they rely on Ofcom contacting the relevant MNO – and even if they are granted, they tend to be for a short term and can be removed if a MNO decides they need the spectrum back.

To give an example, in areas of extremely low population density where an operator may wish to use spectrum under a LAL to provide a wireless broadband service under the Scottish Broadband Voucher Scheme (SBVS), there still may be little commercial incentive to do so. Anecdotal evidence indicates that the likely LAL period that would be granted in a rural area is 3 years. Coupled with the cost cap that can be charged to end users under SBVS, the revenue an operator would accrue from a likely low level of end users in such an area – when taking into account of the outlay to provide the service plus the cost of the license itself – there may be no or negligible return on investment in a 3-year license period, and particularly when there is no guarantee that the license would be renewed once it expires.

To encourage greater certainty for investment, we ask that Ofcom investigates the feasibility of offering longer term licences (potentially use-based) for those wishing to use LALs on a meaningful basis.

Current LAL holders potentially face the double struggle of not being able to provide a long enough licence term to attract meaningful investment and the prospect of larger MNOs potentially taking or undermining their business case. To achieve greater efficiency and management of spectrum, we believe that automating the LAL and SAL processes could be beneficial, to promote greater efficiency and use of spectrum to meet customer demand. We note that a recent report for the UK Spectrum Policy Forum, states that *"Automation of Ofcom's processes for applications for SAL was highlighted by stakeholders as a key area for improvement. A good first step would be to automate the process to provide applicants with a better and more timely view of usage of spectrum in locations being considered and streamlining the application process to allow faster access to spectrum. The need for automation was acknowledged by Ofcom but it was not clear what the timeframe will be to address this, and other points raised below. The development of a more public plan by Ofcom for the next steps with SAL and LAL was viewed as a potentially helpful step."*[3]

The Scottish Government encourages Ofcom to prioritise and reform current ways of working to introduce greater automation (with committed timelines for delivery)

Scottish Ministers, special advisers and the Permanent Secretary are covered by the terms of the Lobbying (Scotland) Act 2016. See www.lobbying.scot

St Andrew's House, Regent Road, Edinburgh EH1 3DG
www.gov.scot

INVESTORS IN PEOPLE™
We invest in people Silver

disability confident LEADER

and longer LALs where end-user cases require it, to encourage more competition, innovation, investment and ultimately faster deliveries of connectivity.

4. The Scottish Government believes that greater monitoring to support the rollout of efficient spectrum use and new technologies could be beneficial. We are mindful that Ofcom's current competition-based approach to regulation and national spectrum policy has the potential to lead to an inefficient use of spectrum and lack of access to the benefit of new technologies.

Recognising that spectrum is a critical and scarce resource, we would welcome greater monitoring and use of information relating to spectrum deployments and new technologies to:

   i) assess the efficiency spectrum usage (urban vs rural);
   ii) to identify what spectrum could potentially be re-deployed in very hard to reach areas (where private operators currently have little incentive to invest); and,
   iii) ensure efficiencies are achieved.

If commercial incentives remain the primary driver for spectrum rollouts, the Scottish Government is alert to the potential risks of too much focus on spectrum use in urban areas and inefficiency in other areas.

We however recognise that there is a balance to be struck, considering the needs of all spectrum users. Specifically on the 6 GHz upper spectrum band (6.425 GHz to 7.125 GHz), the Scottish Government has received representation from the mobile industry that this band should be available to the MNOs to use to ensure greater capacity in 5G networks, as opposed to being solely for local license-exempt use. **We ask that Ofcom considers the most appropriate route to ensure optimum usage of this spectrum whilst ensuring adequate provision of spectrum to facilitate widespread 5G network rollout in the future.**

On maximising the benefits of spectrum and technology, we note examples in other countries which encourage greater transparency as part of measures to reduce the cost of deploying high-speed communications networks. For example, in Portugal, to help achieve the implementation of fixed access networks, promote the joint use of existing infrastructures, and foster an efficient implantation of new physical infrastructures and intersectoral coordination, legislation has established a new *"Information System on Suitable Infrastructures"* which requires communication providers to keep updated records on the suitable infrastructures they hold (e.g., ducts, manholes, inspection chambers and associated infrastructures) – and if requested, operators need to share this information with the regulator or another firm making a request for infrastructure sharing.[4]

The Scottish Government asks that Ofcom considers exploring something similar in the UK for mobile, perhaps by using their existing statutory information gathering powers or creating new requirements for mobile operators to register more data on their sites.

INVESTORS IN PEOPLE™ We invest in people Silver   disability confident LEADER

This could, for example, offer more meaningful transparency on mobile connectivity levels on offer both indoors and outdoors (in terms of speeds, quality of service etc. for consumers and business), spectrum and mobile infrastructure in use at sites and coverage gaps (to better assist Ofcom with monitoring connectivity levels and assess opportunities for new entrants to use spectrum and enter the market). Datasets could also be regularly reviewed to assess the pace of change towards more effective connectivity levels for the UK. For example, to support communications with citizens on our R100 programme, online 'when and where' map functionality is provided (see https://www.scotlandsuperfast.com/the-r100-programme/check-my-address/). **It would be welcomed if Ofcom could explore something similar for SRN.**

From a new technology perspective, the Scottish Government asks that Ofcom considers monitoring the introduction of satellite in the UK to ensure the effective use of this as a means to help achieve connectivity for all.

BT's recent deal with One Web for Low Earth Orbit (LEO) satellite network and connectivity services has the potential to offer more satellite solution opportunities for the UK. The Scottish Government notes that this partnership aims to use LEOs to deliver digital services anywhere across the UK by 2028. Opportunities such as the use of satellite for Internet of Things (IoT) backhaul and fixed wireless access in rural areas are clear, but we are mindful that this deal has been made with an incumbent telecoms provider and to be effective, prices for satellite services need to be affordable for customers and potential wholesale competitors will need access to satellite services at a reasonable price to be able to compete and innovate. Satellite pricing to date has proved expensive, with Starlink services costing approximately £89 a month despite the possibility of an installation subsidy.[5]

The Scottish Government therefore asks Ofcom to monitor next steps on this partnership closely to ensure that maximum access and benefits for consumers and business can be realistically achieved, with the right timeframes to ensure minimum connectivity for all.

5. The Scottish Government believes that SRN has the potential to go further, faster, and wider. We consider that the current SRN targets could be more ambitious when compared with similar rollouts in other jurisdictions. For example, we understand from the recent Plum report accompanying Ofcom's current review that SRN is *"a similar initiative to the Finnish Shared Network (SYV). Both initiatives aim to extend high quality services across rural areas."*[6] The pace of commitments in Finland do however appear to be faster and extend to 5G (with the Finnish SYV joint venture (between Finland's two smaller operators, Telia and DNA) involving i) RAN and spectrum sharing for 2G, 3G and 4G (since 2014) and ii) since early 2021, including 5G with the shared network expanding to cover 62.5% of the area and 28.5% of the population by 2023). The UK SRN's joint programme between UK Government and the four MNOs currently only aims to extend 4G mobile coverage across 95% of the UK by the end of the programme, expected in early 2027. However, as mentioned above, there remains a 5% gap to achieve for 4G mobile coverage (9% in Scotland) and no commitments have yet been announced in terms of 5G coverage. This gap will have extra significance to communities in Scotland.

---

[5] See https://www.starlink.com

[6] See p.13 of Plum Mobile Strategy Review – International Case Studies (Final Expert Report), January 2022.

Scottish Ministers, special advisers and the Permanent Secretary are covered by the terms of the Lobbying (Scotland) Act 2016. See www.lobbying.scot

St Andrew's House, Regent Road, Edinburgh EH1 3DG
www.gov.scot

INVESTORS IN PEOPLE™   We invest in people Silver   disability confident LEADER

The Scottish Government asks Ofcom to explore how more wide-reaching commitments could be achieved in the UK.

In the first instance this could be progressed by i) implementing more ambitious commitments on timing and ii) extending the SRN's scope to cover the remaining 5% (for 4G – much of which is likely to be for hard to reach areas) and 5G (which is a key issue as the economics for 5G are likely to be more challenging, given the greater investment levels likely to be involved to fully deliver the upside of potential 5G connectivity benefits).

We believe that the benefits of various options need to be considered, considering factors such as timing, cost and the quality of service/connectivity that can be delivered. Both existing and potentially new regulatory mechanisms may be needed such as ensuring more aggressive timelines for rollouts in upcoming auctions, automating access to spectrum (to improve efficiency), enabling Ofcom to adapt to regulating a new connectivity landscape (with more private networks as well as major MNOs looking to invest), engaging with providers to explore licence variations to existing commitments (to deliver wider, more effective mobile coverage) and promoting the use of alternative connectivity models (e.g. satellite and fixed wireless access) for more remote areas if no effective fixed or mobile solutions are possible.

6. **The Scottish Government believes that Ofcom should consider both its regulatory and competition law powers when addressing issues of market access.**

   The Scottish Government is mindful that many of the issues raised by the current coverage gap in Scotland centre around the current market-led approach for hard-to-reach areas where the economics of private investment are simply not working. We appreciate that legislation would be required in some instances to equip Ofcom with new regulatory tools to improve connectivity. However, we note that Ofcom also has competition law powers which could be used to assess if more could be done to ensure market access for various new players in the digital connectivity space. Potential new communication providers currently lack access to scarce spectrum resources and struggle to meaningfully invest with the frustration of the current local licensing regime opportunities. With improved access to network infrastructure and spectrum, there is the potential for more competition and innovation to be achieved in the UK. If smaller private network investors can gain better access to infrastructure, many more consumers and business customers could potentially benefit from a richer, wide-ranging set of communication provider offerings.

7. There currently lacks a universal service obligation for mobile. **The Scottish Government asks Ofcom to keep this position under review, particularly with the growing use of alternative technologies in hard-to-reach areas where the cost of investment is prohibitive.**

   The Scottish Government believes that providing a minimum level of mobile connectivity throughout the UK (including in hard-to-reach areas) may be critical to avoid the risk of a wider digital divide and ensure the realisation of both business and consumer beneficial use cases with 5G.

   The Scottish Government therefore ask Ofcom to consider and address the current "gap" in regulatory requirements to ensure the whole of the UK has a base level of connectivity.

Scottish Ministers, special advisers and the Permanent Secretary are covered by the terms of the Lobbying (Scotland) Act 2016. See www.lobbying.scot

St Andrew's House, Regent Road, Edinburgh EH1 3DG
www.gov.scot

INVESTORS IN PEOPLE™
We invest in people Silver

disability confident LEADER

This could be done via mobile coverage obligations – but with a remaining 5% gap for 4G and no SRN coverage commitment yet for 5G, as noted above, additional options should be considered. Options such as variations to existing licence coverage obligations and wider asks of operators in any future mobile spectrum licences to be auctioned could be considered – as well as going beyond mobile or fixed coverage to consider "connectivity" for the UK via alternative technologies.

8. The Scottish Government believes that greater monitoring and targeted measures are needed for hard-to-reach areas, with a new emphasis on feasible technologies for connectivity. We note that the recent publication of Ofcom's Annual Plan for 2022/23 contains the important theme of "Getting everyone connected" as Ofcom want to "*make sure people and businesses can access communications services, and that nobody is left behind as services evolve*."[7] We share this ambition. **We encourage Ofcom to consider any knowledge gaps in its awareness of connectivity and service challenges in hard-to-reach areas in Scotland** – to enable key areas for improvement to be better identified and monitored (e.g. by tracking complaints/concerns of rural communities facing connectivity challenges) – so that more effective, targeted measures can be introduced.

   The Scottish Government believes that the emphasis of any rollout of targeted measures for hard-to-reach areas should be on the need for a holistic review of feasible technologies for achieving a minimum level of connectivity (to ensure any wider digital divide is avoided).

   Furthermore, a move away from an emphasis of simply focusing on fixed and mobile when discussing connectivity should be considered: we suggest a wider "connectivity for all" emphasis (as is it is clear differing geographies, use cases and demand will require tailored approaches in a 5G world). We recognise that significant challenges exist in being able to deliver 4G, let alone 5G, to some hard-to-reach areas – so it is critical to progress feasible alternatives. Therefore moving from a purely "fixed" or "mobile" way of thinking will be essential in delivering ubiquitous connectivity for the UK, with a regional approach being essential for areas where fixed or mobile options may realistically never be feasible.

---

[7] https://www.ofcom.org.uk/consultations-and-statements/category-2/plan-of-work-2022-23

INVESTORS IN PEOPLE™
We invest in people Silver

disability confident LEADER