



21 August 2014

Dear Mr Higham

Consultation on Future use of the 700 MHz Band: Scottish Government Response

*Scotland's Digital Future: Infrastructure Action Plan*¹ outlines the Scottish Government's commitment to a future-proofed infrastructure that will deliver world-class digital connectivity across the whole of Scotland by 2020. This underpins an ambition for Scotland to become a world-class digital nation and requires that people living, working and visiting Scotland can communicate and connect instantly using any device, anywhere, anytime – which will be dependent on future-proofed fixed and mobile networks. Our 2020 vision for digital connectivity is set out in high level terms at www.scotlandsdigitaldialogue.org.

With ubiquitous availability of mobile data services being a key component of this vision, the Scottish Government believes that spectrum availability will be crucial to the future development of mobile data services. We recognise that a number of spectrum bands are, on an international level, being considered as candidate bands to support the future demand for mobile data services. Of these, the 700 MHz band is of specific interest to Scotland due to its potential to allow cost-effective mobile coverage in rural areas to provide services for the public, businesses and potentially in support of Emergency Service communications. We therefore support Ofcom's proposals in respect of this band and our reasons for this are outlined in Annex A.

Whilst we recognise that this consultation is primarily focused on the costs and benefits of the change of use of the band from primarily DTT to mobile data services, we feel that the consultation document does not fully provide context to all issues raised within it and/or wider issues relating to technology and coverage. This response also sets out a number of areas where further explanation and/or consultation would be welcomed.

I hope this response is useful and I would welcome the opportunity to discuss this matter with Ofcom in further detail.

¹ <http://www.scotland.gov.uk/Publications/2012/01/1487/0>

Yours sincerely

A handwritten signature in black ink that reads "Colin Cook". The signature is stylized, with a long horizontal flourish extending to the right from the end of the name.

Colin Cook
Deputy Director, Digital Strategy & Programmes Division

Question 18: Do you agree with our proposal that we should make the 700 MHz band available for mobile broadband?

The Scottish Government broadly supports Ofcom's proposals to make the 700 MHz band available for mobile broadband. A very brief assessment of some of the benefits of using the spectrum in this way is as follows:

- The 700 MHz band (694-790 MHz) has favourable propagation characteristics that could allow wireless broadband coverage to be provided over large areas with fewer cells (compared to higher frequency bands), therefore with potentially reduced network infrastructure costs.
- When used for the macro network, these frequencies could allow for reliable outdoor and indoor coverage as these frequency ranges also offer favourable building penetration of radio signals.
- The upper edge of this frequency band is adjacent to the 800 MHz band in which LTE systems are being deployed in the UK. It could result in greater availability of RF components and reduce equipment complexity.

Having already been identified at WRC 2012 for mobile broadband services use in ITU Region 1, which includes Europe and the UK, we understand that this band may provide at least 2x30 MHz of additional new spectrum for mobile broadband services.

The band plan supported by GSMA and other stakeholders for ITU Region 1 is the APT (Asia Pacific Telecommunications) band plan (lower duplexer), based on 3GPP band 28. It is considered to have a strong potential to be a nearly globally harmonised band and therefore higher expectations of economies of scale.

Question 20: If, as a result of this consultation, we decided to go ahead with the proposed changes, what factors and evidence should we take into account when considering whether to hold an auction near to the time of availability of the spectrum or earlier?

We do not agree that a future auction should be held as early as 2016 or 2017 as suggested in the consultation document. As new usage of the spectrum is not likely until the early part of the next decade, we believe that any auction should be held shortly in advance of the spectrum being made available. Given that the spectrum might ultimately be used for future technologies or technologies currently in development (as well as 4G), we believe that a premature auction may make assessment of appropriate market values – for all parties – challenging. Therefore, at this stage, we don't see compelling reasons to justify such an early auction.

Other issues:

1. We note that in parallel with this document, Ofcom published a document "*The Future of Free to Air TV: a discussion document*" which emphasises the need for any effects of future use of the 700 MHz band to be carefully managed to minimise any effects for viewers of Freeview. We would concur in placing importance on this point.
2. The consultation document identifies some potentially high costs of changing the use of this spectrum band from DTT to mobile broadband services. We would welcome clarity from Ofcom and/or the UK Government on who will bear these costs.

3. As outlined in this response, the mobile services which will may ultimately be delivered using the 700 MHz band are a key focus of the Scottish Government. We would like to understand more about the technologies Ofcom believes are likely to be delivered: 4G, 5G or others? We are also keen to understand more about the associated coverage requirement/obligation elements of the auction design which are being considered and on what basis these will be set: population and geographic targets which are even higher than for 4G; higher bandwidths; or, others such as broadband infill? We presume that if Ofcom decides to proceed with its proposals, these issues will be the subject of a future consultation. We welcome clarification of when these issues will be consulted upon and moreover, an early opportunity to feed into Ofcom's associated preliminary work in drawing up its consultation proposals around these issues. Throughout this process, we request that Ofcom seeks to work closely with the Scottish Government to ensure that the auction is designed to deliver outcomes which fully reflect the needs of Scotland.